DOCUMENT RESUME

ED 062 628 AC 012 607

TITLE	Commission on Post-Secondary Education in Ontario--Draft Report.
INSTITUTION	Commission on Post Secondary Education in Canada.
PUB DATE	72
NOTE	113p.
AVAILABLE FROM	The Ontario Government Bookstore, 880 Bay Street, Toronto, Ontario, Canada (free)
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Capital Outlay (for Fixed Assets); *Educational Change; *Educational Finance; *Educational Needs; *Educational Planning; Enrollment Trends; Income; Manpower Development; Operating Expenses; *Post Secondary Education; Program Planning; Universities
IDENTIFIERS	Canada; *Ontario

ABSTRACT

Views and recommendations of the Commission on Post-Secondary Education of Ontario, Canada, related to meeting the needs of post-secondary education in the province during the next two decades are presented in this draft of the final report. The report discusses the aims and objectives of post-secondary education, the prospects for change, and instruments of implementation. A total of 72 recommendations is made. The five appendixes are as follows: A. Briefs Submitted to the Commission; B. Public Hearings of the Commission; C. Commission Studies; D. Statistics on Enrollment and Finance; and E. Analysis of Unit Income and Expenditure in Post-Secondary Education. (DB)

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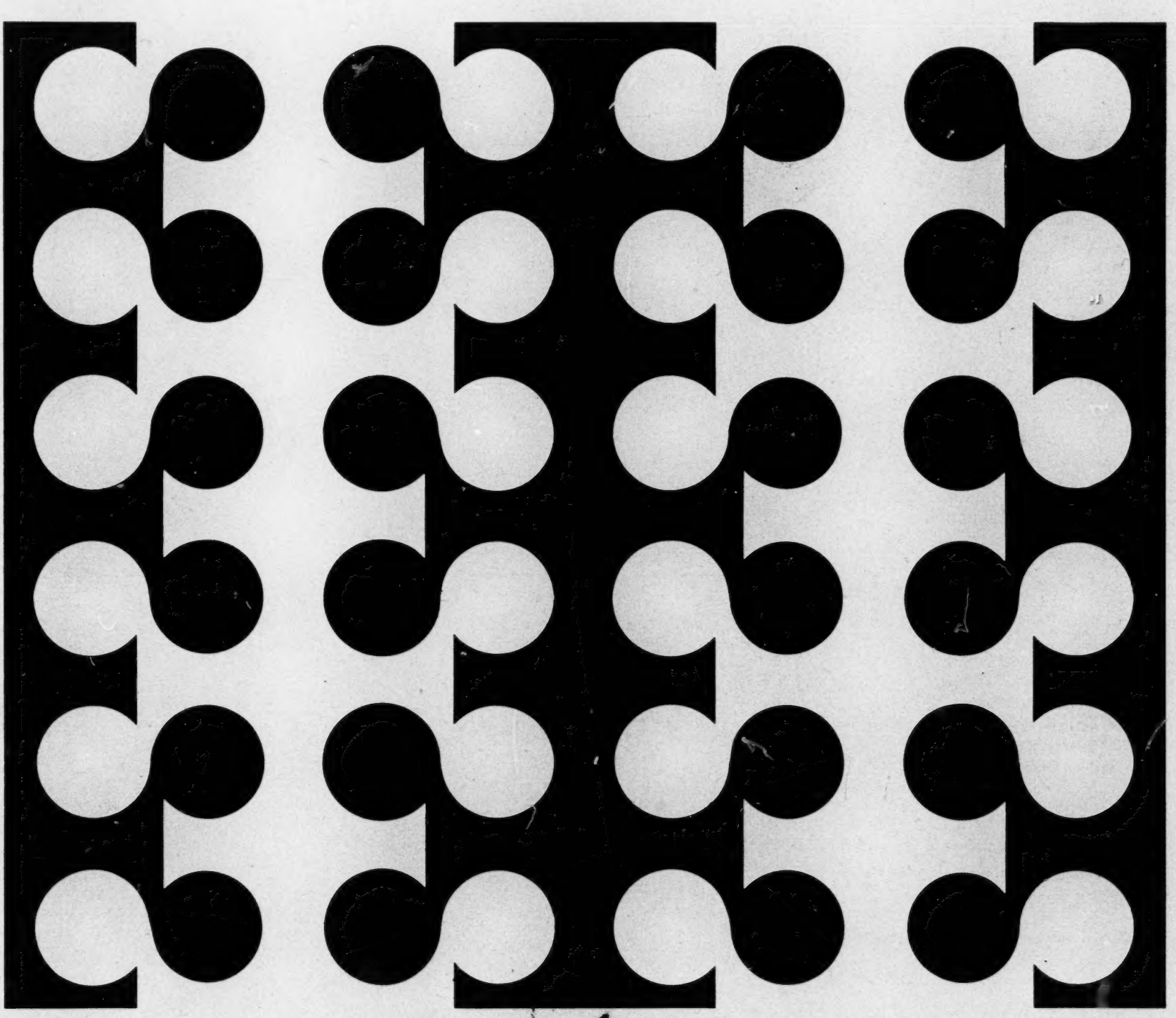
Commission on Post-Secondary Education in Ontario



Available, free, from
The Ontario Government Bookstore,
880 Bay Street,
Toronto, Ontario.

Published by
the Queen's Printer,
W. Kinmond, Toronto
1972

Design Bruce M. Rapp Associates, Toronto

Commission on
Post-Secondary
Education in Ontario

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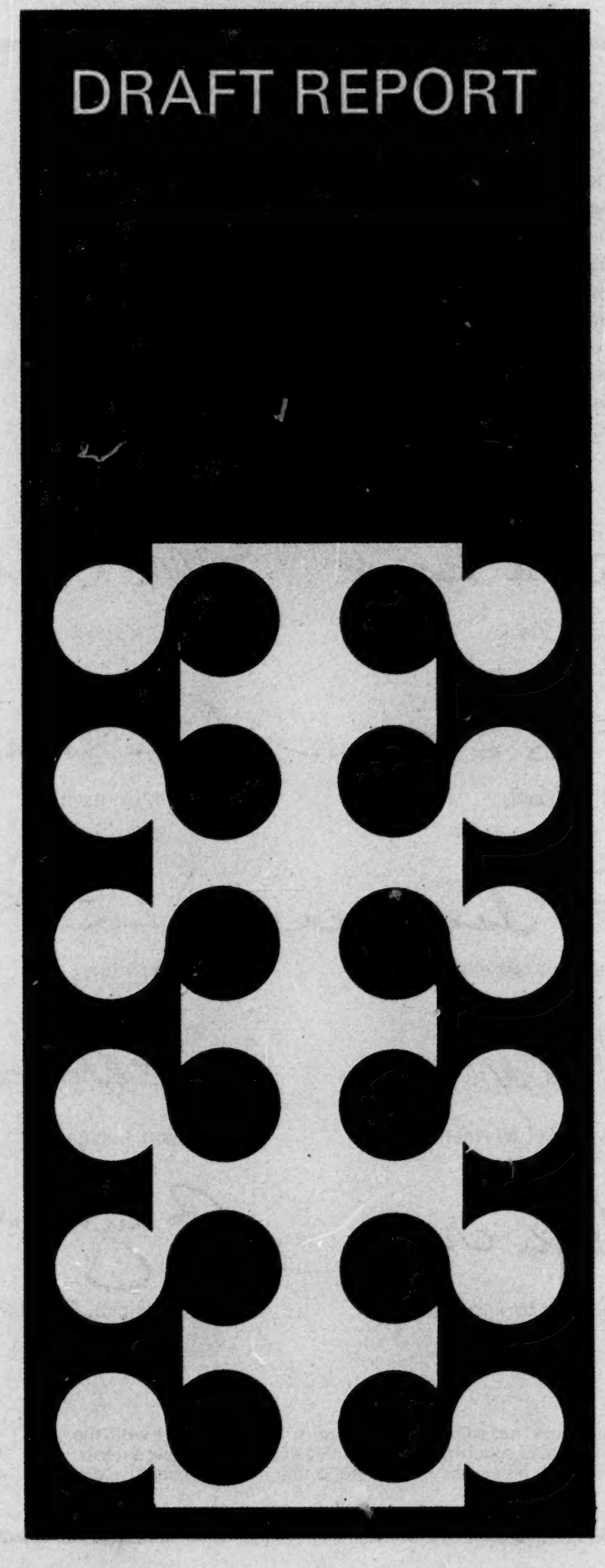

PREFACE

Since the appointment of our Commission, we have sought comments, opinions, and recommendations from the public in a number of ways. Indeed, from the very beginning, we considered the involvement of the public in the preparation of our report as one of the most important aspects of our mandate. It was for this reason that we published in a newsprint edition a preliminary report, ***Post-Secondary Education in Ontario: A Statement of Issues***, in which we tried to set out the principal issues facing post-secondary education in Ontario. It was also for this reason that we called for briefs and held public hearings throughout Ontario.

Now, as we approach the final stages of our work, we are publishing a ***Draft Report*** in which we set out the views and recommendations we have reached so far. This draft reflects not only our research and thinking, but much that we have learned through public discourse. Before formally submitting a final report to the Government of Ontario, we would like to have the benefit of public comments once more. We therefore invite written comments on the following draft. In a few weeks we will hold a number of public meetings in various centres in Ontario to discuss these comments and the draft.

For further information please write to the Commission. Suite 203, 505 University Avenue, Toronto 101, Ontario.

David Black

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Edna Tietze

Douglas Wright, Chairman

B. Kymlicka, Secretary

Hugh L. Macaulay
resigned February 26, 1971.

Mr. Black has signed this Preface in full agreement with the principle of soliciting further public comment on its contents. However, he wishes it understood that he has substantive disagreements with the Report as it now stands and unless it is considerably changed will only sign the Final Report with appropriate dissents.

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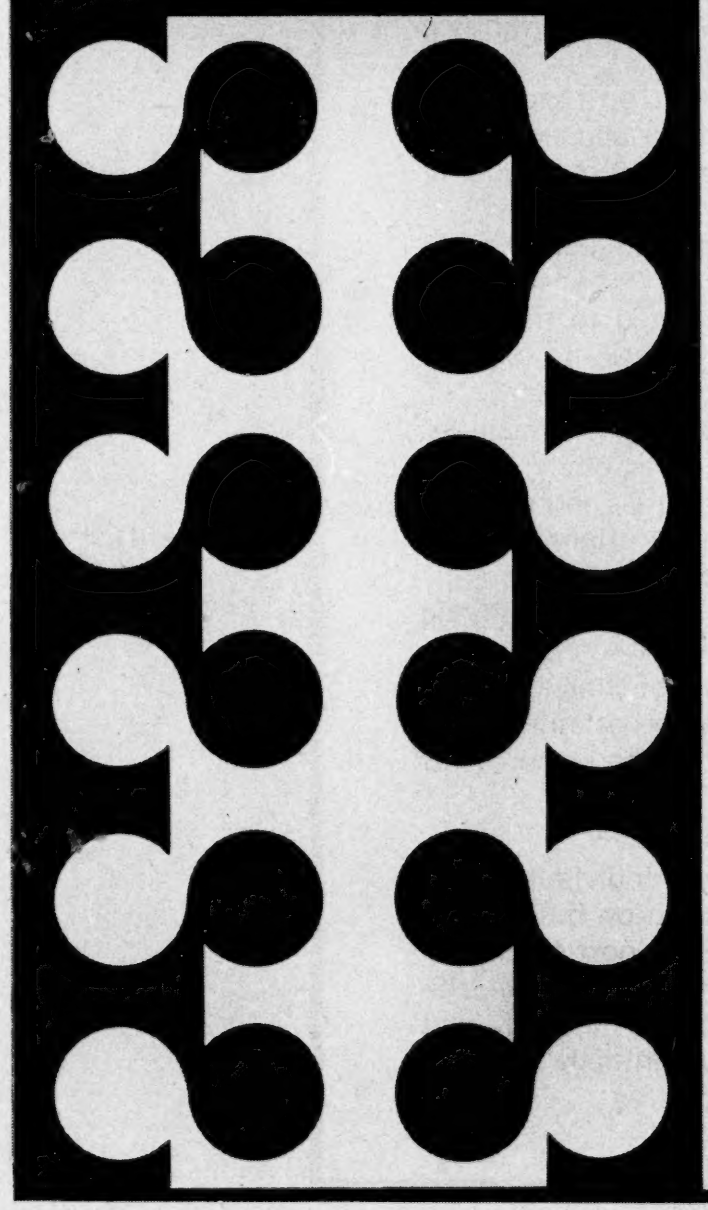

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Terms of Reference

A Commission on Post-Secondary Education in Ontario is appointed, effective April 15th, 1969, to advise the Minister of Education and Minister of University Affairs under the following terms of reference:

It shall be the responsibility of the Commission:

1 To consider, in the light of present provisions for university and other post-secondary education in Ontario, the pattern necessary to ensure the further effective development of post-secondary education in the Province during the period to 1980, and in general terms to 1990, and make recommendations thereon.

2 In particular, but not to the exclusion of other matters, to study and make recommendations on:
*the educational and cultural needs of students to be met at the post-secondary level in Ontario, including adult and continuing education;
*the patterns of student preference and demand in post-secondary education, especially as they are influenced by social and economic factors and in the light of possible changes in primary and secondary education;
*the number of students for whom provisions should be made in various types of institutions and programmes;
*the type, nature and role of the institutions required to meet the educational needs of the Province with particular reference to existing institutions and their ability to meet present and future demands;
*the facilities required to meet needs, including specialized facilities such as research laboratories, libraries, computer facilities, etc.;
*the need for and nature of centralized or shared facilities and services;
*the functions and interrelations of the bodies and institutions involved in the administration and development of post-secondary education;
*the principles that should govern the transfer of students among different types of institutions;
*the costs, allocation of resources and methods of financing for post-secondary education in Ontario as related to the attainment of equality of educational opportunity and as related to the resources of the Province.

3 To provide full opportunity for all interested individuals and organizations to express opinions and offer discussion on both broad and specific issues related to the development of post-secondary education in Ontario. To ensure the attainment of this objective, the Commission should invite written briefs, hold public hearings and publish the results of studies and recommendations initially in draft form so as to generate public comment and discussion.

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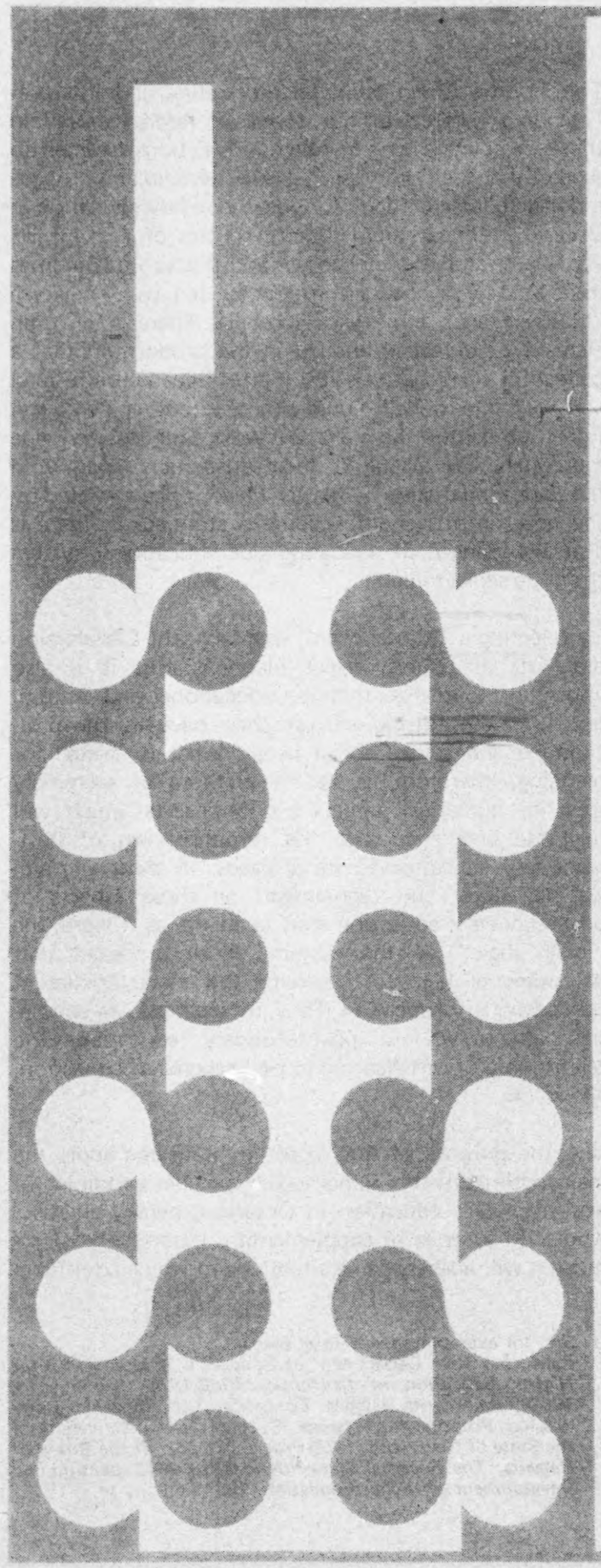
Introduction



The Commission on Post-Secondary Education in Ontario was established by Order-in-Council on April 15, 1969.[1] On May 9, 1969, the Honourable William G. Davis elaborated on the terms of reference and defined the task of the Commission: to make recommendations to the Government, through the Minister of Education and the Minister of University Affairs, on "patterns [of post-secondary education] required for the future to ensure appropriate and orderly development to meet the needs of the province over the next two decades." The terms of reference also required the Commission "to provide full opportunity for all interested individuals and organizations to express opinions and offer discussion on both broad and specific issues related to the development of post-secondary education in Ontario. To ensure the attainment of this objective, the Commission should invite written briefs, hold public hearings and publish the results of studies and recommendations initially in draft form so as to generate public comment and discussion."

This report is submitted to the public as a draft of our final report. A further series of public hearings will be held following the publication of this report to hear and consider additional comments from the public. Following this we will make whatever revisions and additions appear necessary and formally submit the final report to the Government of Ontario.

The publication of the report in draft form reflects the desire, and the need, to involve as many people as possible in one of the most important aspects of our social life: the determination of the role of post-secondary education in our society. The Commission, aware of this need, has already sought briefs and comments from the public on the subject of its enquiry. Since the publication of ***Post-Secondary Education in Ontario: A Statement of Issues***, in which we set out our perception of the important issues, we have received 335 briefs and held 25 public hearings throughout Ontario.[2]

The high level of response and the quality of both the briefs and discussions at the public hearings testified to the great importance that citizens of Ontario attach to

1 The Commission's terms of reference (OC/1398/69, April 10, 1969) are given in full on page 4.

2 *See* Appendix A, Briefs Submitted to the Commission.

post-secondary education. This concern, it has become clear, is not only with the economic or financial aspects, significant though these may be; rather, the major focus of the written and oral comments has been on the social and cultural importance of our educational institutions. We have tried to articulate these purposes in Chapter II, on Aims and Objectives; we were guided by them in our recommendations.

Indeed, it soon became evident that we, as a Commission, could not engage in our research until we articulated, to our own satisfaction, the kind and dimensions of the issues upon which we were requested to make recommendations. Moreover, a review of the work of commissions and committees charged with similar tasks in other jurisdictions made us cautious of undertaking either research or recommendations without stipulating the purpose of such efforts.

The task, as we perceived it, was to translate the concern of the public into policy questions and then, in the light of our own values, to assemble the relevant information and write our report.

In the process, the Commissioners had a number of observations and conclusions that have served as guides in our approach to the task at hand. Perhaps the most important of these guiding principles was our faith in the responsiveness of our social system to human needs. Often the rhetoric of the critics seems to suggest that nothing short of a revolutionary change is likely to bring about any improvement in our educational system. We have rejected this assumption and built on the supposition that we can correct whatever abuses there may be through an evolutionary process of change.

Secondly, we have interpreted "post-secondary education" very broadly. As any list of the institutions and programs usually associated with post-secondary education would make clear, the only characteristic common to all of these is that they are, in one sense or another, consequent upon attendance at secondary schools—that is, "post-secondary". The very diversity of the cultural and educational needs of our population cannot be confined to the traditional institutional framework. Our definition of post-secondary education, therefore, extends not only to traditional educational institutions but encompasses cultural institutions as well.

Thirdly, the Commission had to define and interpret "planning". Much in our terms of reference—and in those of commissions in other jurisdictions—seemed to suggest that the Commission should develop and propose a detailed "Master Plan" for post-secondary education in Ontario.[3] The apparent lack of success of such efforts elsewhere, and the conceptual and practical difficulties associated with such an enterprise, led us to reject a "Master Plan" form for our report. There is, also, an element of unreality implied in the proposition that a collection of individuals—no matter how well informed and well intentioned—could not only anticipate educational needs for the next 20 years, but also provide a programmatic means for their satisfaction. Apart from the danger that such a "Master Plan", once accepted by the government, could become a straitjacket, there is also the danger of alienating our educational system from the social milieu.

By rejecting a "Master Plan" approach, the Commission did not, of course, reject planning. But it is also important to realize that the educational and cultural needs of the future will, as they have in the past, combine and reflect social needs. What is needed for planning, therefore, is not a plethora of seemingly specific, numerical targets but a process which will facilitate and encourage the responsiveness of post-secondary education to social needs. In short, our aim was to study and recommend on those aspects of post-secondary education that make up, as it were, the "inner logic" of the system: those processes that determine or help to determine the characteristics of post-secondary education. Thus, for example, we emphasize alternatives to post-secondary education, the relationship of certification to post-secondary education, and so on.

It is the purpose of this report to state and apply the main outlines of this "inner logic" to issues pertaining to post-secondary education in Ontario generally and as a whole. In a series of supplementary reports, the Commission will address some situations in which additional

3 ***See,*** for example, these master plans:
California State Department of Education, ***A Master Plan for Higher Education in California, 1960-1975*** (Sacramento, 1960). Minnesota Higher Education Co-ordinating Commission, ***Proposal for Progress*** (St. Paul, 1969). University of the State of New York, ***1966 Progress Report of the Board of Regents: The Regents' Statewide Plan for the Expansion and Development of Higher Education,*** 1964 (Albany).

and special recommendations are needed. We have recently drafted, and submitted for special public discussion, a report on post-secondary education in Northeastern Ontario. A special report dealing with post-secondary education in Northwestern Ontario is already published. We will also make some special recommendations on post-secondary education of Franco-Ontarians, of the professions, in agriculture, and of our Indian population. An interim report dealing with the structure of the proposed Department of Colleges and Universities was submitted by the Commission to the Minister on June 10, 1971.

The Commission's desire to understand and use the "inner logic" of the system has led us to propose recommendations that form an interlocking whole: when action is taken on individual recommendations, therefore, care should be taken to respect this interdependence.

The way we approached our task, together with our aims and objectives, also helped us to formulate our research policy and research projects. We have sponsored 36 research projects—many of which we will publish—ranging from a study on cost and benefits of post-secondary education in Ontario to a selective study of Canadian high schools; from an appraisal of the academic year to a study of manpower and post-secondary education. The Commission generally awarded its research contracts on the basis of competitive tenders.

The estimated total cost of the Commission to the completion of our work is $1,370,000. The breakdown is as follows: Commission deliberations $209,000; public hearings, study visits and so forth $269,000; collection of data and preparation of background studies $624,000; publications $268,000.

We realize that our Commission was established in difficult and turbulent times for education. A veritable vortex of changes envelops our post-secondary educational institutions and, in the giddy gyration of growth, tends to obscure the differences between long-term historical trends and the problems posed by the immediate situation. The permanent and the transient sometimes appear indistinguishable. Our goals, in part a reflection of the permanent and the transient, are in danger of becoming confused. Inevitably, we turn to history and ask: "How did we get here?" (Or, as the proverbial mother would put it, "Where did I go wrong?")

Descriptively, the development of post-secondary education in Ontario since World War II can be characterized as follows: after a temporary decline in enrolment after World War II, veterans left the campus, there was a steady growth of student population in our post-secondary educational institutions, reaching the proportions of an "explosion" during the 1960s. There were two basic reasons for this growth. One was an unusual demographic configuration of population growth throughout the western world following World War II which, in Canada, was accentuated by heavy immigration.[4] Our population growth was, in turn, reflected in the growth of our schools. More important, however, was the increased proportion of the population—especially the young—that went to school, and did so for an increasingly longer period of time. Underlying this trend was a second reason: the determination—both on the part of the individual and the public generally—to increase educational opportunities and achievements of our population.

The growth in numbers resulted in increasing diversity. For some time after World War II, as before, post-secondary education in Ontario meant mainly an undergraduate education offered by six universities or a traditional vocational education offered by nursing schools, teachers' colleges, and agricultural colleges. By 1970, in addition to enlarged vocational schools, there were 16 universities, 20 colleges of applied arts and technology (some with more than one campus), and the Ryerson Polytechnical Institute—all offering a great variety of programs, many at advanced levels.

The increase in numbers of students, institutions, and programs was accompanied by a larger role for government in the affairs of post-secondary education. This role was most obviously reflected in the increase of public funds allocated to post-secondary education.[5] Less obvious but at least as important was the government's decision to create a whole new kind of post-secondary educational institution—the colleges of applied arts and technology. Finally, public authorities extended support to individual students. Before 1960,

4 *See* Appendix D.

5 *See* Appendix D.

assistance was provided to students mainly on the grounds of academic excellence and was of minimal magnitude (about $1.8 million for Canada as a whole). Bursaries awarded according to need accounted for only a small fraction of total student assistance. By 1971-72, public assistance to students in Ontario amounted to $132,300,000.

The reasons for the rapid change are difficult to determine with any certainty. Most obviously, the people and the government decided to spend more money on, and more time at, post-secondary educational institutions. The reasons they did so—or said they did so—have changed both in kind and in mix over time. Increased economic growth, increased social and occupational mobility, competition with the USSR and the USA, desire to enlarge our knowledge of nature and society and to strengthen our national culture—all have been used as explanations and justifications for the expansion of post-secondary education. It now appears that some, if not most, of our expectations concerning education have been excessive: it is now recognized that post-secondary education is not a panacea for our social and economic ills.

As an explanation of historical trends, the above leaves much to be desired.[6] We still do not know how we came to have these expectations. Since similar expectations have arisen in most countries in Western Europe, as well as in the United States, it is hard to discover any single set of objective social, economic, or demographic criteria that can be said to predicate the growth of post-secondary education. Both rich countries and poor countries experienced it; so did those with both high and low rates of economic growth.

As a recent study for the Organization for Economic Co-operation Development pointed out:

> The study of expansion patterns of higher education reveals no direct correlation with the factors traditionally thought to influence educational growth. There is, for example, no apparent relation between enrolments and the wealth of a country (or its rate of economic growth). Both Greece and Sweden have been among the countries having the highest rates of growth in post-secondary education while both Switzerland and Spain were long among those with relatively low rates. The same is true, as to the level of scientific and technological development of the country. Even the demographic factor played only a limited role; in the majority of countries it accounted for no more than 20 per cent of the growth in enrolments, and in some countries higher education expanded during a period in which the size of the age group was contracting. . . . As to the variables which are "internal" to the educational system, it is not possible to discern any pattern here either.

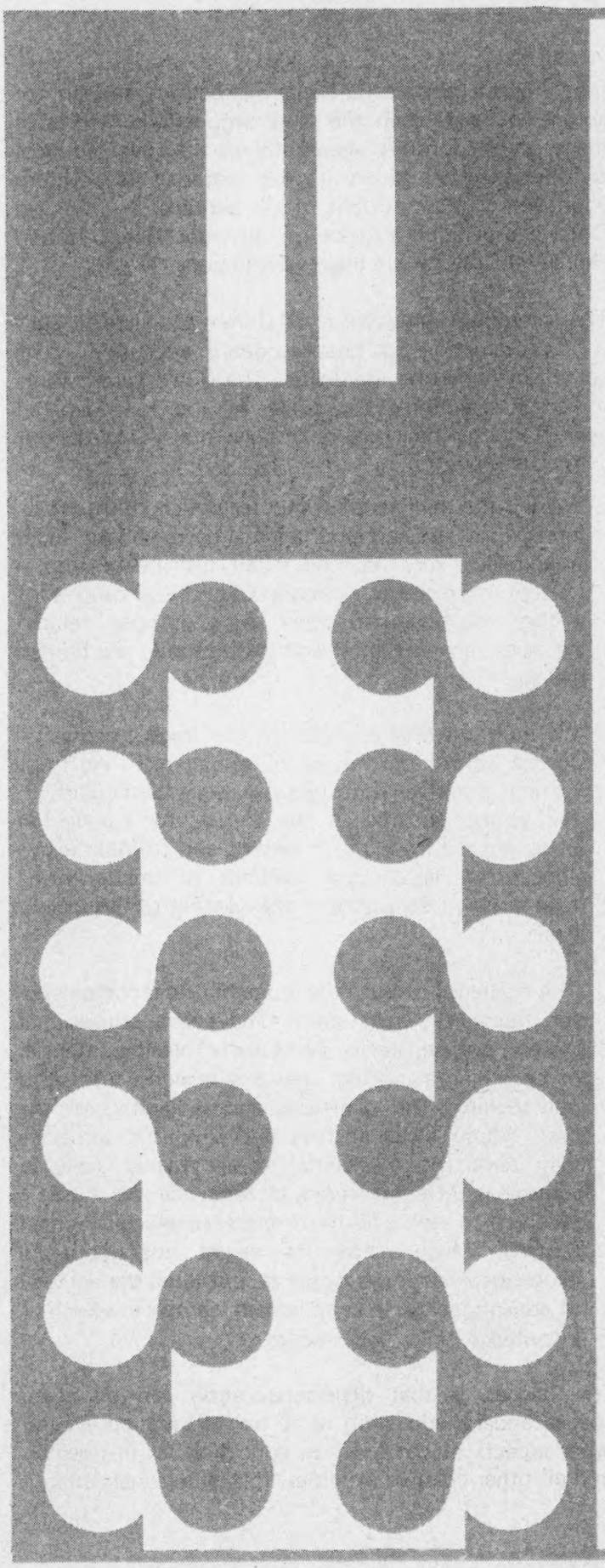
We are, therefore, left only with the unsatisfactory and unsatisfying conclusion that post-secondary education seems to expand when a society desires that it be expanded.

If modern social phenomena result from conscious realization of social will, it does not follow that, once established, they can be easily altered. In post-secondary education the trends toward universality and diversity are not likely to diminish. Nor is the role of the government. Rather, we must ask ourselves whether the present forms of these manifestations of social will are susceptible to non-disruptive and constructive changes—and make sure that these modifications are in the direction of our aims.

6 For a detailed chronological account of this trend, *see* W. G. Fleming, ***Post-Secondary and Adult Education***. (Toronto, University of Toronto Press, 1971).

7 "Policy Implications of the Growth in Higher Education," in ***Organization for Economic Co-operation and Development Observer,*** No. 50, February 1971, 14. This article summarizes a comprehensive and detailed study of higher education in the Western European countries: ***Development of Higher Education 1950-1967: Statistical Survey*** (Paris, Organization for Economic Co-operation and Development, 1970).

Aims and Objectives



There is a fascinating parallel between the accusations levelled at modern society and those levelled at post-secondary education. Our society, it is said, is becoming bureaucratized, regimented, impersonal, alienated, fragmented, mass-oriented—adjectives that also appear with surprising regularity in the various indictments of our educational system. This is hardly surprising, for society and its educational system are inseparable. Indeed, many earnest and dedicated reformers have taken education as the main—if not the only—tool of social reform. Somehow, the idea that we can use education for this purpose seems natural, for the educational system is in many ways a mirror to our society. It reflects, often with remarkable detail, all the blemishes of our society: the inculcation of unnecessary and destructive competitiveness among individuals; the senseless ranking, both social and academic; the maldistribution of resources and preferences; the structured and bureaucratized system which we deplore but to which we submit; the injustices of socio-economic origin that are reflected in our school system—and a variety of other real and imagined social ills. The violation of our moral and social standards seems even more outrageous when one considers that all these things are committed not by individuals, not on mature citizens, but by the society as a whole on the most vulnerable portion of our population: the young.

And yet, it would be wrong to conclude that the only way to correct social injustices and inequities is through a radical reform of our educational system. The educational system, like the mirror, reflects the reality in front of it. If the reality is beautiful, we are captivated by its image; if it is ugly, we are tempted to destroy it. But it is futile as well as senseless to break the mirror: the warts and wrinkles will not disappear.

Indeed, in this destruction we would be also depriving ourselves of the very instrument that transmits our values—that tells us whether the image we see in the mirror is ugly or beautiful. Education is one of the great devices of our civilization: it is one of the important cultural institutions that allows us to pass on, from generation to generation, the wisdom, traditions and knowledge that we treasure. Moreover, this knowledge is not merely transmitted as indisputable dogma, but is continually being adapted and altered after it has been examined and criticized in the light of current values. This is true of all our educational efforts—be they concerned with the transmission of simple skills or the

intimation of new understanding at the frontiers of knowledge. In the process, new skills and new knowledge are discovered.

It is characteristic of our civilization that the creation and transmission of this new knowledge take place in the same institutions as the transmission of traditional values. These seemingly contradictory purposes add a dynamic element not only to our educational system but to our society as a whole. Even in the best of times, therefore, there are tensions and creative conflict within our institutions and between them and society at large. If education is both a mirror and the judge of the image in the mirror, it cannot be otherwise.

This dual purpose of education also prevents us from recommending any "ideal" education: for behind each of these two purposes lies a presupposed, but seldom articulated, "ideal society". While we as a Commission will attempt to make our values clear, we have no wish to tell our society what it ought to become. We also reject suggestions that the chief way to correct our social injustices and inequities is through the educational system.

Indeed, we must never allow the educational system to get out of touch with reality by assuming a type of future which may never be realized. We would be creating unhappiness and new injustices if we prepared young people to live not in our society but rather in some Utopian world of educational reformers.

Because the socializing of citizens and their preparation for life and work in our society are the two essential functions of the educational system, it is an inescapable fact that education cannot get too far ahead of, nor too far behind, the society it serves.

Although we may reject Utopianism we do not necessarily accept the ***status quo.*** We are convinced that both our society and our educational system have great capacities for change and reform. And through our observations and our research we have come to appreciate, much more than we did two years ago when we started our work, that Ontario has been well served by its post-secondary educational system and that, in turn, the people of Ontario have been generous in their treatment of our institutions.
We found that our system is less bureaucratized and less rigid than practically any other such large system and that unjust and wasteful social distinctions, though not absent, do not reach the same proportions here as in many other countries; apparently we have avoided most of the excesses found in the majority of western countries. Most important of all, perhaps, we found in Ontario a genuine attitude of openness to reform and change which is rare in other jurisdictions.

The paramount value which the Commission has brought to its evaluation of post-secondary education is its commitment to the individual. The Commission wants to emphasize the importance of the individual in education: the individual must be central. As one of our committees put it:

> Behind the millions of computer punch cards, B.I.U. units, formulae and mountains of paper shifted, filed, stockpiled, xeroxed, and often distributed into a variety of disposal containers, in these centres of higher learning and their multi-purpose related agencies, governmental and professional, are human beings.
>
> We must preserve and cherish the fragile, exquisite, special animal of this earth we call man. We must commit ourselves to inspire new hope, particularly in the young, for life in the future, for having the courage to discard the irrelevant and to look at our educational goals, and methods of implementing man-serving institutions in the context of the society goals.
>
> The challenge of our time is complex and compelling, for humanity is at stake. The entire educational system, post-secondary particularly, has the potential of becoming a moving, changing responsive force in our society. The platitudes and metaphors of the past, overly facile analysis and simplistic solutions may have to be abandoned or created anew in somewhat different frames of reference. We must be prepared to seek a frame of reference which is human centred, which places its weight not upon the educational institutions, ***per se,*** but upon the delivery of educational services to human learners in search of knowledge, skills, and wisdom.

The danger is that depersonalization can permeate post-secondary education as it has already permeated other aspects of our lives. In education, as in research and all other creative activities, this depersonalization is

destructive, both to the individual and to society as a whole.

We believe that education must be viewed as a humanizing process that is central both to our civilization and to the individual members of our society. When we talk about encouraging openness, diversity, flexibility, and innovation in post-secondary education, we are talking about much more than the relationship between post-secondary educational institutions and society. We are also talking about a post-secondary educational system which is open to every individual, which responds to the diversity of individual needs and wants, which has the flexibility to respond to changes in the individual's needs and wants, and which is innovative enough to anticipate his future needs and wants.

Education must prepare and help the individual to live in a highly complex, rapidly changing, technological, and probably bureaucratized society. It must provide him with the kind of education that will assure the survival of the human spirit. No matter what social changes occur in the next few decades, they must not be allowed to subvert the basic, humanizing purpose of education.

Our belief in this central humanizing function of education leads to three specific implications which will later be reflected in our recommendations:

First, education must be man-centred. The various tests and examinations, the buildings, the programs, and the teaching methods—indeed, all facets of the post-secondary educational system—should be oriented towards serving individual students rather than the institutions themselves, future employers, or the professions. Tests, examinations, and admission requirements, for example, should be devised to help the student evaluate himself and to facilitate his learning; other purposes should always be only secondary. We must never forget that the basic purpose of education is learning; that learning cannot but be, ultimately, a highly individual matter.

Second, if the individual is at the centre, he must have the opportunity and the responsibility to decide what educational experience is best for him. The whole spectrum of educational services must be available to him, not just a degree program, a certification process, or what the institution thinks may benefit him. It is surely a matter for the individual to decide what is "best" for him. This belief will be enunciated in our recommendations for loosening the ties between education and professional licensing.

Third, we believe that educational services should be available to all citizens throughout their lives, not just for a number of years immediately following high-school graduation. If education is man-centred, then it should not be limited to a particular age group. In fact, our assumptions about our future society indicate that educational services can and indeed should be available to citizens of all ages.

Underlying this belief is our deep-rooted skepticism about the value of universal-sequential education for the young. We look with doubt and misgivings on the various social and economic pressures which lead more and more young people into year-after-year attendance at schools and colleges and, at the same time, discourage their return to education at later stages of life.

There is little logic in the assumption that one more year of schooling at the age of 20 is more beneficial than a year of education at the age of 30, 40, or 60. Indeed, both the individual and society would often benefit from the individual's earlier entry into the labour force as well as his returning to education at a later date.

Massive growth has been the dominant and undeniable characteristic of post-secondary education during the past quarter-century. This growth has been both a symptom and a cause of the great changes in Ontario's post-secondary educational system since World War II. Enrolment in post-secondary educational institutions has doubled and more than doubled again. This was due not only to the increase in population but also to the growing proportion of young people who are graduating from high school and immediately embarking on some form of further education. Moreover, there has also been an increase in the number of persons who are returning to post-secondary education after a period of work.

The growth in enrolment has been accompanied by a tremendous growth in the number of post-secondary educational institutions and the diversity of educational opportunities offered by these institutions. New universities have been built from the ground up. Both the established and the new universities are offering programs which would never have fitted into the arts-science-professional school mix of the exclusive

universities of three or four decades ago. New types of post-secondary institutions—colleges of applied arts and technology and a number of smaller, vocationally oriented colleges—began meeting still other demands and needs of students.

With the addition of these new and enlarged institutions with new and enlarged purposes, the qualitative nature of post-secondary education itself has changed. Teaching methods, administrative structures, even the social milieu of the institutions have changed and will continue to change. Students who once looked to a friendly dean or professor for personal advice are now offered an array of professional health, counselling, employment, and other social service personnel. Faculty members, whose lives used to revolve for the most part around the campus, find that their varied skills are increasingly in demand off-campus as well as in the classrooms and labs. Paternalistic but personal administrators are being replaced by managers who arbitrate the often-conflicting demands of the community, the student body, and the competing, multi-faceted faculties.

Indeed—and contrary to popular opinion—our educational system has proven remarkably responsive to changing social demands. Few other social institutions have changed so quickly and so peacefully. Perhaps these changes have taken place too smoothly, for the ease of transition has allowed most of us to keep on judging and thinking about post-secondary education just as we did more than two decades ago. Consequently, we still think of "quality" education as it applied to universities before the change from elite to mass education.

The implications of the transition to mass education are apparent everywhere. For instance, post-secondary education, which used to be synonymous with university education, traditionally served as a screening agent for society—as a gatekeeper on the road to status, power, or affluence. Using such devices as examinations and diplomas, it established the individual in the role he was likely to play for the rest of his life. Screening still persists but it is performed by so many institutions for so many students that its significance is crumbling. Hence the desperate and bewildered cry, "But what does a B.A. mean nowadays?" It obviously doesn't mean what it meant 30 years ago. Similarly, the social and economic privileges that used to follow attendance at post-secondary institutions are going to diminish as more and more students attend.

We think that many of the changes which accompanied the growth of post-secondary education during the past decades were desirable. In fact, we want to warn against attempts to bring back some of the features of previous eras. Specifically, there are two dangers:

The first danger which could accompany the desired increased accessibility to post-secondary education would be the continuation of a class system in education. We fear the development of sharp social distinctions between two or three types of institutions, such as colleges of applied arts and technology and universities. Indeed, this is a danger that some countries view as inevitable and others even as desirable. However, while we recognize the need for different kinds of post-secondary education, we view all forms of post-secondary education as equally important. Obviously, we cannot issue an edict on social values nor can we ask the government to do so. But our recommendations will suggest a number of ways to nullify or at least minimize the development of such unjust and wasteful distinctions.

The second, and already obvious, danger is the way in which the privileged, publicly licensed, monopolistic professions are responding to the breakdown of the screening process. As accessibility to post-secondary education has increased the number of eligible members, some professions have tended to respond not by increasing their memberships but by increasing the educational requirements needed for admission to professional membership. The cost to both the individual and society is considerable: the public cost of professional training has been increased while the number of practitioners has been limited. We deplore this rigid linkage of educational requirements with professional certification (licensing) and shall recommend a number of policies aimed at correcting this trend.

The massive growth of post-secondary education—particularly the trend toward universal-sequential attendance—has led to new dangers. Perhaps the most frightening is the growing willingness of some public leaders to use post-secondary education as a means of combatting the unemployment and the underemployment created by our economic system. Some have already suggested that one possible way to decrease unemployment is to prolong school attendance even further.

It is difficult to imagine what aspect of post-secondary

education would remain unchanged if such a policy was really put into effect. What, for example, would be the impact on our young people if school attendance became a matter of "conscription"—if they realized that they were in school not for educational reasons but because our socio-economic system does not know what to do with them? What would happen to our institutions once their personnel realized that they were being supported by public funds not because of any intrinsic merit of their activities, but because of their custodial function? Would the public's attitude be the same if instead of educational institutions they were supporting academic playpens? We fear that such an attempt would not only destroy the dignity of the individual but, inevitably, also that of society itself. It must not be allowed to happen. The provision of alternatives to post-secondary education, therefore, is one of the indispensible preconditions to many of our recommendations.

There has been another significant change in post-secondary education since World War II: the determining influence of governments has increased greatly. This development dramatically affects the way we evaluate the social purposes of post-secondary education. As long as our institutions performed their social roles without the support of public resources, the acceptance of those roles was a matter for institutions themselves to decide. Curiously enough, it may have been the attraction of the social roles, rather than of any goals in particular, that drew governments into the field. It was definitely the use of post-secondary education as a social escalator and, for a time, as an indispensible tool in the race with the Russians that justified the unprecedented infusion of resources into post-secondary education both in the United States and in Canada.

The significant change in Ontario, however, does not result from the kind of justifications that the government may have used to rationalize increasing its support for post-secondary education. The heart of the matter rests with the decision to make post-secondary education an area subject to public interest. The social roles of post-secondary education thereby become sanctified by the government which, in turn, inevitably becomes responsible for the performance of these roles. The reconciliation of the social purposes of post-secondary education with whatever other purposes there may be in society can then take place only in the political arena. Or, to put it rather bluntly, the introduction of an overwhelming public support has resulted in the politicization of post-secondary education. Since the government is the main agent of this process, it will, whether it likes it or not, bear the brunt of responsibility for whatever uses and abuses our society makes of post-secondary education.

Realizing this, and also that social purposes are likely to change over time, we took as objectives the clarification and, if possible, the delineation of the necessary powers, procedures, and institutions the government must have if it is to discharge responsibility in an open and efficient manner while, at the same time, safeguarding the institutions from unnecessary and meddlesome bureaucratic controls.

The educational goal of post-secondary education is to prepare citizens for life and work. This, in turn, breaks down into two subsidiary categories of educational goals. One, the general and traditional aims of education: to transmit knowledge, to create and transmit new knowledge, and to stimulate the development of critical attitudes—habits of mind—in students. Second, equally traditional and admixed with the first one, is the preparation for a career through training.

In our survey of current as well as historical literature we have not found any other educational goals or any more concise expression of them. We accept these as an accurate, though general, expression of educational purposes.

What gives meaning and life to these general goals is how they are accomplished and how they continue adjusting to changes in society. We have formulated a set of principles by which we believe these goals should be accomplished in our society; our recommendations, as well as our criticisms, are based on these principles.

1. **Universal accessibility:** We have accepted the need for universal accessibility to post-secondary education at all ages as our first principle. This principle must be reflected in a broad range of financial as well as academic policies. Hence our recommendations in this area stress the encouragement of lifelong education, part-time school attendance, and new ways of delivering educational services.

2. **Openness:** We have adopted the principle that all educational services should be more and more open to the public and, indeed, integrated within the general

cultural and educational activities of the community. Institutions such as public libraries, museums, art galleries, and science centres should be treated as part of the community's educational services.

3. **Diversity:** As lifelong opportunity for education becomes more of a reality, there will be a need for even greater diversity of educational services than we have at present—diversity not only of institutions but of admission standards, programs, length of courses, and so forth. This principle is far easier to announce than to guarantee. As part of the public sector, post-secondary education is vulnerable to the pressures of homogenization and uniformity. We therefore offer recommendations which would safeguard the present diversity and introduce additional forms of educational services and alternatives.

4. **Flexibility:** There is simply no way anybody can establish firm and definitive guidelines for future educational services in an open and democratic society. Even if it were possible, it would be antithetical to the very ideals of openness and democracy. We must, therefore, have a post-secondary educational system which is sufficiently responsive to new social demands yet is also prepared to abandon those that are no longer deemed necessary.

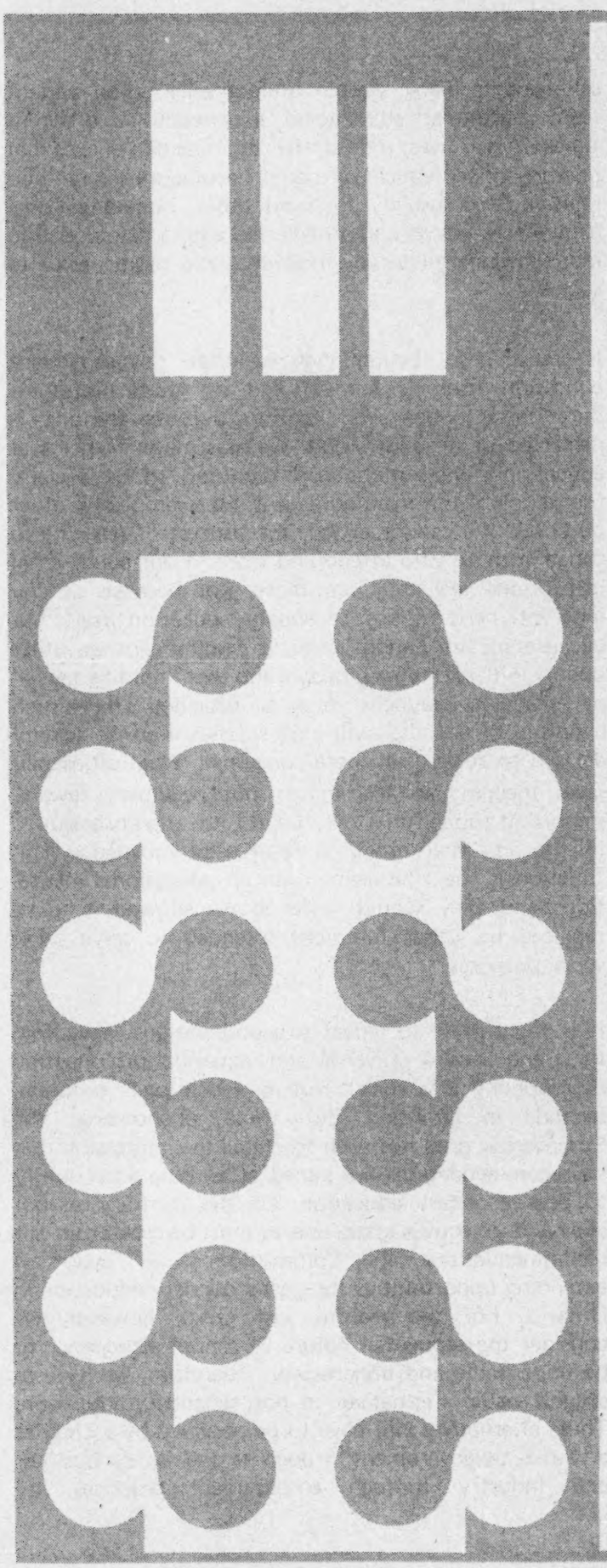
One cannot plan for innovation, but incentives can be provided that would, when innovation and new social demands appear, allow and support such developments. Our recommendations on financing offer one such incentive, and those regarding the role of government and of institutional administration reflect the same orientation.

5. **Transferability:** We are convinced that, even if wide accessibility and even diversity were achieved, our purpose would be defeated if there were insufficient opportunities for transfers from institution to institution, from program to program, from profession to profession. We are, therefore, offering recommendations designed to break down the licensing and educational links (one of the chief causes of rigidity), and also to provide orderly procedures for transfers of abilities, aptitudes, and skills (not just formal credits) from one post-secondary enterprise to another and, indeed, from any relevant activity in one's life to the educational process. We are advocating an "accessible hierarchy" of educational services.

6. **Public accountability:** Both political principles and reality demand that we recognize the public nature of post-secondary education. The fact that practically all the direct costs of education are borne by taxpayers is alone a forceful argument for public accountability. What makes the acceptance of it necessary is, and must be, our faith in our democratic political institutions.

Public accountability must not be confused with detailed bureaucratic controls and meddling. Both as individual citizens and as members of the Commission, we have come to view the increased bureaucratization of our lives as one of the main problems of our society. In post-secondary education, bureaucratization endangers the very values we cherish and hope to pass on to succeeding generations; it also makes the exploration and search for understanding more difficult. The result can only undermine all the rest of our educational goals.

The Prospects for Change



A. Alternatives

Perhaps the most fundamental single characteristic of recent developments in post-secondary education is the trend toward universal and sequential attendance. Almost every other aspect of post-secondary education is the result of, or related to, this trend. It lies behind the expanded enrolment that has led to increased public expenditures on post-secondary education and thus to growing governmental interest in that field. Increases in the proportion of our young people attending institutions of post-secondary education have, in turn, created demands for greater diversification of educational services and, thus, led to growing confusion about the "role" or "purpose" of post-secondary education in our society. We have also begun to have doubts about the impact of these quantitative increases on the quality of our educational performance.

Since many, if not all, the problems we face in post-secondary education stem from this trend toward universal and sequential attendance, we must consider its implications. We must ask ourselves whether we wish to allow the trend toward universal and sequential education to continue, or whether we should provide some viable alternatives.

It seems to us that the reasons for this mass attendance at post-secondary educational institutions are almost wholly social: they do not appear to stem from any inherent attributes of post-secondary education as such, although they do have profound implications for our educational institutions. Certainly, the dearth of desirable and viable alternatives to post-secondary education tends to prolong school attendance.

Undeniably, young people leaving high school face an increasingly limited choice of alternatives to higher education. More and more jobs in large corporations and in government are defined in terms of escalating educational requirements; even more important, large structured organizations use formal educational attainment to determine the career paths of their employees. Professions and para-professions seem to be vying with each other to increase the educational prerequisites for entry into their fields. The vicious circle is completed by the growing proportion of people in the labour market with many years of schooling to their credit. Because many employers and professional organizations assume,

often for dubious reasons and with dubious consequences, that these additional years of schooling produce better employees and professionals, or at least rely on years of schooling as a convenient bureaucratic screening device, those so qualified tend to stand a better chance of employment.

These and related developments result in a powerful social pressure to "stay in school". Certainly most of our young people are advised and encouraged to continue their education after high school. And, they are warned about the unpalatable alternatives in terms of job opportunities, life style, and social status should they decide to drop out.

The problem is further complicated by the fact that if a student decides not to go on to post-secondary education after graduation from high school, he is faced not only with the question "What is there to do?" but with diminished chances of going back to school later in his life, should he desire to do so. Therefore, any scheme aiming at breaking the sequential nature of post-secondary education must offer increased opportunities for people to return to educational institutions later in their lives.

The lack of viable alternatives to post-secondary education, then, effectively "conscripts" our youth into our educational institutions. We should not assume that this "conscription" is hidden from the students. Nor should we ignore the incalculable, but significant, social and emotional consequences of institutionalized life on mature people. We can hardly be surprised if, as a result of all these factors, we hear the argument that the longer an individual stays in school—and the more society invests in him—the more he is entitled to a well-paid and, indeed, a guaranteed job.

Looked at from yet another point of view, the sequential nature of our post-secondary education seems to be based on the assumption that everybody can benefit from formal education at the same time in their lives and that post-secondary education is something one takes as "preparation" for life. These assumptions affect not only society's view of the nature of post-secondary education but, more important, society's attitude toward and treatment of students, both in terms of financial and instructional arrangements. Yet the reasonableness of these assumptions is by no means self-evident; many people undoubtedly could benefit from additional educational experience at different times in their lives. Indeed, the Commission believes that post-secondary education could become more vital and relevant if it usually followed other, non-educational experiences which could make the additional education more meaningful to the individual and more useful to society.

It must also be emphasized that post-secondary education itself is harmed and its social usefulness diminished, when its central purpose—learning—is neglected or misunderstood. We must never forget that educational institutions can continue to be socially useful only if this main purpose is not swamped by other purposes. We cannot expect the process of learning to thrive if those who attend and work in our educational institutions feel they are there, not because of any inherent merit of post-secondary education itself, but because society cannot provide employment or other opportunities for young people and that "holding tanks" or "academic playpens" must be provided. Under such conditions, learning will not survive even if society decides to reward all those concerned. What ultimately gives meaning to learning is not pecuniary reward, important though that may be; it is the dignity acquired by the individual through the search for knowledge. This function is the vital element in our educational institutions and they would suffer if we allowed it to be replaced by other functions intended to serve other social purposes.

It is worthwhile to repeat two observations here: first, the trend toward universal and sequential prolongation of schooling is a social, not an educational, problem; second, in pointing out these phenomena, the Commission does not wish to create the impression that its recommendations are aimed at curbing accessibility to post-secondary education. On the contrary, as our aims and objectives state, and as must be clear from our recommendations, the Commission is in favour of extending opportunities for post-secondary education in Ontario. For the reasons just given, however, we consider the sequential nature of school attendance to be undesirable and unnecessary. Therefore, we have to suggest viable alternatives to post-secondary education. These alternatives will have to be provided by society as a whole—by government through its policies, by business and industry through employment practices, by

organized labour in its attitudes toward conditions of employment, and by professional organizations through their rules governing entry into their ranks. The Commission is convinced that all these segments of our society will co-operate in these endeavours when they realize that they can only benefit from them.

If the Commission cannot make specific recommendations on the whole range of social policies that would provide alternatives to universal and sequential post-secondary education, we can propose an educational framework that would be responsive to any changes brought about by these policies and that might also encourage their implementation. In practice this means two things: better integration of education with work and life, and increased accessibility to post-secondary education.

The increased integration of education with life and work has many implications. Apart from such obvious moves as providing more work/study programs and shorter, more intensive courses, we must also create opportunities for substituting work experience for educational credits and for allowing sub-professionals to use their experience as building blocks for upgrading. In general, it should be our aim to break down the often artificial barrier that now exists between "education" and "life" or "work".

This integration will also be strengthened by increased accessibility to post-secondary education. Usually, when we think of the problem of accessibility to post-secondary education, we have in mind financial barriers that may prevent high-school graduates from continuing their education at a university or a college. Important though these considerations are, there are also many other obstacles involved. We must also facilitate the return to education of those who have not chosen to go on immediately after high school; those who have chosen one of the alternatives to post-secondary education; those who in the middle of their careers wish to change their occupation with the help of post-secondary education; those who may have already retired, and many others.

Integration of living and learning can be achieved only when all the barriers to accessibility are removed, when educational services are provided to all citizens when they need them, and when citizens know they can obtain the education they want at any time throughout their lives.

Recommendation 1

The Government of Ontario should seek, through its own actions and through encouragement of appropriate policies on the part of other governments and organizations (both private and public), to provide socially useful alternatives to post-secondary education. Increased support for programs such as Canadian University Service Overseas, Frontier College, and Opportunities for Youth would benefit society as well as providing viable, paid alternatives to remaining in school.

Recommendation 2

The alternatives for young adults should be funded as realistically and/or generously per individual per annum as are formal types of post-secondary education.

Recommendation 3

The Ontario government should, by legislation and example, provide opportunities for the employment of secondary-school leavers who wish to pursue post-secondary education on a part-time basis. This should be accomplished by the provision of patterns of employment that permit intermittent and part-time study. Provisions should be made for employees to have the right to time off for study without pay, and employees should have special subsidies or other incentives to participate in co-operative educational programs.

The purpose of Recommendations 1 to 3 can be put very simply: there is a decreasing number of viable alternatives open to the high-school graduate except to go on to a post-secondary educational institution. As we have argued, this situation is undesirable both on social and educational grounds. What is needed, therefore, is a whole new policy of providing our young people with viable and constructive alternatives to continuous schooling. Given the enthusiasm of our young people to better our society, we should be able to provide the necessary policy framework to harness it. At the same time, a similar effect could be achieved by increasing the opportunities for part-time studies, thereby achieving a closer integration of working and studying.

Recommendation 4

Formal programs in universities and colleges should be more fully integrated with real opportunity for experience and practice so that pertinent practical experience gained outside formal institutions may be substituted for conventional laboratory and practice work. Payment to the providers of such training could be at levels up to those now prevailing for institutionalized instruction in practical subjects, although decreases in cost levels should be possible.

Recommendation 5

Elementary, secondary, and post-secondary teachers and administrators who have had non-school work experience relevant to their specialty should be given preference in hiring over those lacking such experience.

Recommendation 6

Short courses for intensive upgrading or retraining for professionals or para-professionals should be developed and periodically reviewed by the appropriate co-ordinating board[1] to ensure continuing relevance.

To be eligible for grants, courses leading to recertification of professional personnel should be open to related para-professionals and should permit achievement of professional status through continual re-evaluation.

Recommendation 7

All students who have been out of full-time, regular education for two years should have the right to conditional admission to post-secondary institutions without formal requirements.

Recommendation 8

Graduate study should be defined so as to include part-time as well as full-time participation where programs of courses and research related to the career interest of the student are pursued outside the university in industry or government.

1 *See* Recommendation 51.

Recommendation 9

Part-time and full-time students should be equally eligible for student assistance programs.

Recommendation 10

In order to facilitate the return to learning opportunities for all professionals, salaried employees, and wage earners, legislation and/or structures should be devised for the purpose of investing funds and/or percentages of income, salaries or wages, annually in order to provide for periodic study leaves where it is so desired by the professional, salaried employee or wage earner. (For example, an employee who has foregone 10 per cent of his salary would be able to take a study leave of some six months every five years.)

Recommendation 11

Future agreements between unions and employers should be structured to permit the worker a choice of simple salary increase or equivalent educational benefits for studies of his choosing.

The purpose of Recommendations 10 and 11 is to allow employees, individually or through collective negotiation, to take a portion of their pay increase in educational leaves. The choice, of course, should be left to each individual. It is the individual who must assess the relative merits of higher earnings or the appropriate mixture of occupational and cultural advantages to be derived from further education. A similar policy has been already established by law in France.[2]

Recommendation 12

Ontario Manpower Retraining programs should be made more widely available by such means as dropping the present requirement of a three-year attachment to the labour force. The program should be expanded to include services such as general literacy training and "pre-training" in the case of anticipated large lay-offs by employers.

2 *See* Law No. 71-575, July 16, 1971, bearing on the organization of continuous vocational training within the continuing education program, Official Gazette of the French Republic. *See also* National Inter-Vocational Agreement, July 9, 1970, on Vocational Training and Up-Grading Programs.

Recommendation 13

Voluntary organizations which have made important contributions to the development of adult education should be eligible for provincial grants to meet some of their fixed overhead costs as well as some costs of programs operated.

Recommendation 14

Wherever possible, student housing should be made part of general-purpose public housing, and public support provided on that basis.

Recommendation 14 confirms two basic aims of the Commission. First, it would eradicate the distinction between "students" and other members of the community, thereby helping to integrate education and society. Second, it would permit a better assessment of overall social needs in housing. Also, if such housing units were to become properly multi-purpose, adjustments of their use depending on the various demands would be facilitated.

B. Accessibility

There are a number of reasons why post-secondary education should be made available to all people of all ages. First of all, education has come to be accepted as an integral part of our lives. This view has been heightened by countless prophetic visions of a "leisured" or "post-industrial" society which, it is claimed, will both demand and be based upon more and more education. One need not wholly accept these visions to realize that education is already playing a more important part in our contemporary society. One reason for this is the high rate of change in our economic structure which is continually creating new occupational requirements. Another is the simple fact that the more education people have, the more they seem to demand—and perhaps even need.

Second, accessibility to post-secondary education must be made universal simply because most of it is made possible by the expenditure of public funds. The method of financing post-secondary education is such that recipients of it are heavily subsidized by the public, and public subsidies of privileges limited to small segments of the population are both undesirable and, in a democracy, untenable over a prolonged period of time.

Third, because of the generally accepted belief that post-secondary education is essential for social and economic advancement, accessibility must be increased in order to give mature adults the same educational opportunities that young people are enjoying today. Whether it is correct or not, as long as this belief persists and as long as we continue to channel and classify employees by educational achievement, opportunities for education must be extended to those generations that did not have the same educational opportunities when they were of school age.

In this connection, it is important to realize that universal accessibility and diversity must go hand in hand. Because ours is, fortunately, a very diverse and pluralistic society, it follows that if educational services are to be universally available, they must also be diverse. There are dangers that we will transfer some of our bureaucratic methods to this endeavour and "rationalize" it or that we will simply try to extend existing, but unsuitable, educational structures to meet these new needs. This would be foolish and, indeed,

destructive. In order to satisfy our educational needs we will have to relax such bureaucratic propensities and abandon some of our shibboleth of "academic" standards.

Clearly, if we really desire increased accessibility to post-secondary education, we must provide the necessary institutions and policies to facilitate it. One factor to be considered is the geographic distribution of educational services. The Commission has approached this aspect of accessibility in three ways: by proposing that additional centres of population be provided with educational establishments; by recommending the establishment of an "open university" in Ontario; and by making available to a wider public the educational resources contained in our public libraries, museums, and science centres throughout this province. We would like to draw particular attention to one aspect of these proposals: they all demand some measure of innovation and considerable readjustment of attitudes toward what constitutes the "proper" way of providing educational services.

Accessibility to post-secondary education must also mean accessibility to some of its tangible symbols, such as degrees and diplomas. The reasons for this are obvious, though not necessarily commendable. We may regret the obsession many people have with paper credentials but, until we change many of our social arrangements, it is not unreasonable for people to desire them. The Commission's answer is that "degrees" should be awarded not only for work accomplished within the walls of our educational institutions; they should also be available on evidence of comparable accomplishment achieved by individuals not formally associated with a university or a college. The Commission has devised several ways to accommodate this need for access to degrees: first, we are proposing a general evaluation service that would provide examinations on demand and award degrees on performance. Secondly, we are recommending a scheme of "transfer" ("add-on") courses that would allow people to change fields, programs, and professions without going through the unnecessary and wasteful process of repeating requirements that have already been fulfilled in another context. The scheme is based on the easily verifiable observation that people learn throughout their lives; at least some and probably much of their learning should be taken into account when transfer is desired. Thirdly, we are proposing that selected institutions in Ontario begin awarding degrees based on learning accomplished outside the university. Finally, we have come to the conclusion that both common sense and social consideration call for the awarding of degrees in our system of colleges as well as in our universities. Once Grade 13 is abolished, there will be an even stronger reason for awarding degrees in both universities and colleges, because many programs in both kinds of institutions will require the same number of years to complete.

A special word must be said about the problem of transfers from one kind of post-secondary educational institution to another. Although the present system of haphazard and uncertain transfers from colleges of applied arts and technology to universities clearly brings hardships to individual students, a formal, uniform system of transfers would, in our view, lead to the destruction of diversity in our post-secondary educational system.

If the transfer policy stipulated that "x" credits in a college were worth "y" university credits, x and y could be either equal or unequal. If they were equal, then the colleges of applied arts and technology would actually become junior colleges, a policy rejected by the Ontario government and concurred with by the Commission. If they were not equal, this would imply that the colleges' courses were either inferior or superior to university courses. But that implication is unacceptable: while these courses may or may not be "equal", it is to be hoped that they are different. Furthermore, a uniform transfer policy would very likely be followed by a uniform syllabus or, at least, by a tendency at the colleges of applied arts and technology to imitate university undergraduate courses.

We suspect that the real problem—and its solution—lies neither in the imposition of an artificial uniformity on the whole of post-secondary education nor in any decreed comparability of "academic quality". Rather, the problem lies in the failure of some of our post-secondary institutions to achieve "parity of esteem" with the university. Much of what the Commission is recommending throughout this report is aimed at correcting this disparity. We are strongly convinced that while post-secondary educational experiences are and ought to be ***different,*** they should be ***equal*** in social esteem. Undoubtedly it will take some time to accomplish this

objective. The Commission entertains few illusions about the tenacity of social myths, or about the ability of a bureaucratic edict to change them. Consequently, while the main thrust of our recommendations in this area is aimed at achieving our basic purpose, "parity of esteem", we are also proposing a series of steps that would lessen some of the current hardships experienced by students.

An important aspect of accessibility to post-secondary education is its linkage with accessibility to a career in one of the self-governing professions. The chief problem in this area is the use of educational achievements as professional requirements. There has been a tendency to increase the number of years of schooling required before a candidate is allowed to be licensed as a professional practitioner. While the argument for this increase is based on "excellence" and "safeguarding professional standards", frequently the increased requirements merely stipulate additional years of schooling or additional diplomas or degrees, often in any field at all. Since most of these changes have been introduced by self-policing professions, it is hard to avoid the suspicion that some of the impetus came more from self-interest than from concern about the public welfare.

To examine some of the trends and characteristics a little more carefully, a number of instances can be cited which are revealing. At the same time that Ryerson and the colleges of applied arts and technology have made available commerce, accounting, and similar programs, the Institute of Chartered Accountants has determined that a university degree, in *any* area, will be required for candidates who wish to sit for their examinations. In law, the transfer of a significant portion of legal education from the profession to the universities, in 1957, appeared to be a step forward and was designed to provide a five-year program leading to an LL.B. degree. This was already one year longer than the previous course had been, but in practice the competition for places in law schools has resulted in candidates usually being required to hold at least undergraduate degrees, so that the LL.B. degree now requires seven or eight years of post-secondary education. In another field, it has been reported that one in eight of the entering class of McMaster's second medical intake already held Ph.Ds.[1]

1 E. J. M. Campbell, "The McMaster Medical School at Hamilton, Ontario," ***The Lancet,*** October 10, 1970, 764.

And, in yet another field, the Association of Professional Engineers, which has long offered direct admission by examination, has announced that it intends to close this access and require all candidates to hold university degrees in engineering. It is argued that very few people have in fact been winning entry to the engineering profession through the examination route—this notwithstanding the large number of well-trained technologists graduating from Ryerson and the colleges of applied arts and technology in recent years. The Association's examinations bear examining. They closely resemble university examinations. For example, in subjects such as mathematics and applied physics, they undoubtedly represent a substantial hurdle for graduates of Ryerson and the colleges of applied arts and technology, but it would be fair to ask how many members of the profession who have enjoyed professional status for, say, 10 years or more could pass the same examinations. Likely very few. If it is argued that the examinations are required to protect the public from malpractice, it is not very reassuring to realize that most of those now registered are evidently not so qualified. But this is patently improbable. It is much more reasonable to conclude that most practising engineers are in fact reasonably qualified, and therefore that the examinations do not represent a realistic assessment.[2] Accordingly, it is improper to use these to bar qualified graduates in technology from professional engineering status.

Justice demands equity of treatment and parity of esteem for like performance, whatever the background. Efficiency demands that we make use of the natural talents and cultivated abilities of the people of Ontario as they can be demonstrated, without respect to chronology, and certainly without paying for excessive amounts of post-secondary education designed primarily to serve as an initiation process for an increasingly rigid social structure. Efficiency also requires that education and training be fully integrated with the processes of learning and of working. The evident irrelevance of

2 Similarly, it has been often argued that recertification of medical doctors after, say, five or 10 years, would almost certainly lead to the failure of many doctors now serving in smaller urban centres and in rural Ontario. Since, as in the case of the engineers, one cannot reasonably argue that those doctors are incompetent, it should raise the legitimate question about the validity and propriety of the certification examination in the first place.

certain aspects of the undergraduate engineering curriculum discussed above, for example, would be substantially modified if access to professional practice were defined in realistic and operational terms.

The professional associations, of course, are not the only bodies responsible for linking education and occupational qualifications in too rigid a manner. And in their case, despite abuses, such a linkage is not basically irrational. But the same cannot be said of the increased use of educational achievements by large business and government organizations for hiring and promotional policies. Here we are up against one of the spectres haunting modern society: bureaucracy. In their need to classify, order, and establish routines, bureaucracies have resorted more and more to using formal educational attainments as criteria for job classifications and promotions. A glance at advertisements for openings in governmental and large private bureaucracies will confirm the existence of this tendency that persists despite evidence that it is often unjust and unreasonable.

Again, the problem has become more obvious and acute as a result of increased numbers. As long as the pool of aspirants was small and more or less limited to those with the same kind of education, the use of educational achievements for professional and employment requirements was not intolerable. Today, however, we are dealing not only with vastly increased numbers, but with a multitude of educational experiences. It is counterproductive to aim at diversity in post-secondary education while, at the same time, limiting post-educational employment opportunities for students. Yet this is precisely where we are heading, for, while the spectrum of post-secondary education is widening, we are linking professional and employment requirements more and more to traditional forms of schooling.

This problem is further complicated by the apparent inability or slowness of the professions and bureaucracies to adapt to changes in the kinds and quantities of services demanded from them. In a situation somewhat parallel to post-secondary education, more and more people are demanding a greater quantity, and a greater variety, of medical, legal, and other social services. Just as in post-secondary education, it seems likely that the only way we will be able to satisfy this demand is by widening the spectrum of institutions, organizations, and practices that will provide these services. Indeed, as in post-secondary education, we will have to devise an "accessible hierarchy" of skills, and that will demand (and be supported by) an equally open and flexible relationship between post-secondary education and employment possibilities.

Accessibility must also imply absence of discrimination. This is particularly true in areas that, for various reasons, are not now completely open or that have a high ratio of applicants to admissions. In such cases, and until other measures improve the situation, the Commission recommends a lottery as an instrument of selection from among all qualified applicants. In all other cases we are recommending against any ***numeris clausa*** for programs in post-secondary education.

A most glaring case of discrimination is, of course, that against women. Many recent commissions and committees both in Canada and in the United States have pointed out that women have not fared as well in employment and educational opportunities at the post-secondary level as have men.[3] Undoubtedly, much of the recent concern with this situation is due to changing social attitudes toward women. Equally obviously, post-secondary educational institutions will have to learn to adjust to this new trend and provide increased employment and educational opportunities for women.

Although we do not make any specific recommendations about the role of women in the administration of post-secondary education, it is clear that this sector of public service is just as guilty of discrimination against women as are other public institutions. In part, this discrimination has been obscured by the ability to hide the talents of women in "secretarial" positions. It is to be hoped that both the increase of general awareness of the situation and the specific recommendations listed here will ameliorate the situation within the next few years. The refusal to admit women to post-secondary educational services on account of their age is a particularly undesirable form of discrimination, and we attach special importance to Recommendation 38 which deals with this point.

3 See, ***Report of the Committee on the Status of Women in the Faculty of Arts and Sciences,*** (Faculty of Arts and Sciences Harvard University, April, 1971). ***Report of the Subcommittee on the Status of Academic Women on the Berkeley Campus,*** (University of California, May, 1970). ***Report on Higher Education,*** (U.S. Dept. of Health, Education and Welfare, March 1971). ***Report of the Royal Commission on the Status of Women in Canada,*** (Ottawa, Queen's Printer, 1970).

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Finally, of course, all of these attempts to increase accessibility will have to be provided with appropriate financial support. This is particularly true of those areas in post-secondary education which the Commission believes need strengthening: continuous/adult education, part-time studies, and work/study programs. Recommendations in these areas are included in our sections on alternatives and financing.

Access to Educational Services

Accessibility, as we have already observed, is often a function of geography; educational services should be available throughout the province so that as many citizens as possible have convenient access to them. Reasonable physical proximity helps facilitate access to our colleges and universities. Of course, this need has to be balanced with the costs that these institutions now incur—hence Recommendations 15 and 16. At the same time, the Commission thinks that costs can be lowered, and accessibility increased, by providing education services within a new framework as proposed in Recommendations 15, 17, 18, 19, and, in particular, 21.

Our success in increasing both accessibility and the integration of post-secondary education with our working lives will depend largely on our efforts to encourage part-time studies. The Commission addresses this aspect in Recommendations 10, 22, and 23. Another way to facilitate the achievement of our aims in this area is by increasing the flexibility of our education services and responding more quickly to changing needs. This is the purpose of Recommendations 24 and 25.

Recommendation 15

In communities located more than 30 miles from an existing university (or university-affiliated college), colleges of applied arts and technology should develop university courses in affiliation with a provincially-assisted university. Simultaneously, the colleges' general arts and science program should utilize the learning resources of the proposed University of Ontario. (*See* Recommendation 21.)

Recommendation 16

Satellite campuses affiliated with existing universities should be established in communities currently without universities, university branches, or colleges of applied arts and technology, which are beyond commuting range of such institutions and in which a viable enrolment can be achieved.

It is not feasible, given the scope and means of the Commission, to propose definite locations. However, at least three communities that would seem to qualify now for such satellite institutions are Brantford, Chatham, and Orillia. We think the orderly form of planning envisioned by this report would confirm this judgement.

We do not recommend that these satellite institutions be eligible for the so-called "emergent" grants that characterized new university development in the 1960s. Presumably, both the number of prospective students and the structure of the delivery of services should be such as to accomplish the establishment of such new institutions without special allocations of public funds. Special grants to enlarge library facilities may, however, be required. (***See also*** Recommendation 19.)

Recommendation 17

Special grants should be made available to libraries in communities beyond commuting range of a post-secondary educational institution to enable them to provide supporting materials for courses given by the proposed University of Ontario (*See* Recommendation 21) and to expand existing library facilities.

Recommendation 18

All citizens of Ontario should have access to all libraries, including those in provincial educational institutions such as universities, colleges of applied arts and technology, and secondary schools.

Recommendation 19

The province should adopt policies that would permit and encourage the establishment, through local, community, or private initiative, of a number of small colleges on a scale varying from 200 to 1,000 students in various localities throughout the province.

The purpose of Recommendation 19 is to increase geographical accessibility to, and competition within, post-secondary education. In part, this recommendation

reflects the view of the Commission on the structure of educational services and costs. We believe it would be quite feasible to establish small, learner-centred educational institutions that would be devoted primarily to teaching and so would not incur heavy research costs. Indeed, it should prove quite possible to provide such services in other than permanent "campuses", either through exploitation of learning opportunities in industry or by renting suitable space in available buildings. Such colleges should be eligible for additional operating income corresponding to the annual cost of the capital that would otherwise be provided for conventional institutions.

To safeguard the quality of education offered by these colleges, the appropriate co-ordinating board[4] should establish a province-wide accreditation committee that would determine the college's eligibility for public support. Such an accreditation committee should represent equally three groups: teachers from existing institutions, citizens from business and industry (both management and labour), and students. Initial accreditation could be established on the basis of the plans drawn together to start the college; continued accreditation, periodically reviewed, would depend on performance. We do not think these colleges should award diplomas or degrees. Instead, educational credits from these colleges should be recognized by existing institutions and/or by the proposed institutions offering external degrees.

Recommendation 20

Educational services should be co-ordinated and catalogued within communities and, if practicable, on a province-wide scale so that information on all kinds of programs offered by all kinds of institutions and agencies would be readily available to all.

The University of Ontario

The educational needs of our province, as well as the experience in other jurisdictions (notably Britain and West Germany), point to the necessity of establishing new ways of delivering post-secondary educational services to the people of Ontario.[5] It is, however, imperative that we recognize the particular ends for which the new means are being suggested, for their success or failure can be measured only against such goals.

In the following recommendation to establish the University of Ontario, our purpose is two-fold: to increase accessibility to both post-secondary education and to testing services throughout the province. The institution would also provide a framework for a loose co-ordination of the educational services offered by other cultural institutions in Ontario such as museums and libraries, and should therefore be under the jurisdiction of the Co-ordinating Board of the Open Sector. (***See*** Chapter IV, "Instruments of Implementation, Structure".)

Recommendation 21

We recommend creation of a "University of Ontario" which would:

a) provide, via television, radio, and correspondence, educational services at the post-secondary level to the people of Ontario;

b) provide a testing and evaluation service available on demand to the people of Ontario;

c) award formally earned degrees and, on the basis of services stipulated in b), degrees and diplomas where appropriate without formal course requirements;

d) co-operate with other educational and cultural institutions in the broader provision of educational services.

The provision of educational services via mass media reflects our increased technological achievements. It is not immediately apparent how the traditional concepts of pedagogy can be utilized in these media or where they will have to be modified. Nor is there any assurance that such social goals as the widest possible extension of eligibility to post-secondary education can be achieved merely by the use of mass media. To ameliorate the most obvious problems and to give the new institutions the best opportunity to respond to the real needs of the people of Ontario, the Commission therefore recommends that the University of Ontario link its educational

4 ***See*** Recommendation 51.

5 ***See*** N. McLean, ***Electronic Technology and Post-Secondary Education,*** a background study prepared for the Commission on Post-Secondary Education (Toronto, Queen's Printer, 1971).

efforts with testing and evaluation services. Moreover, through closer co-operation with public institutions such as museums and libraries, it should be able to develop a more knowledgeable perception of the educational demands of our citizens.

The evaluation and testing service should not be based only on past grades or length of time spent at an educational institution; rather, it should be based on educational achievements attained in any manner, carefully measured and evaluated by competent faculties. We foresee an increase in advanced placement based on previous studies and achievements, including those of high-school graduates, through such a service. Similarly, the certification of a degree or diploma should be available to those who, though not graduates of established institutions, have achieved an equivalent level of competence in their fields. We must, in short, provide the necessary instruments to acknowledge the vast amount of education that goes on outside our educational institutions and also provide incentives for independent study. These instruments and incentives can be found in the testing and evaluating service of the University of Ontario and its power to award diplomas and degrees.

By recommending that the University of Ontario be part of the "Open Sector", the Commission hopes to facilitate the co-ordination and co-operation that the University will require from local public libraries and similar institutions. The effectiveness of the University of Ontario will, in part, depend on supporting instructional material being readily available to the citizens. Such material will have to include not only textbooks but video tape recordings, playback machines, home laboratory kits, and the like.

The Commission is not making a detailed recommendation on the structure and governance of the University of Ontario. The close integration of its services with all the other elements making up the Open Sector would suggest, however, that its Board of Governors should include considerable representation of cultural institutions and the general public. We certainly would wish that the Co-ordinating Board[6] for the Open Sector take the establishment of the University of Ontario as one of its first tasks.

6 *See* Recommendations 51 and 54.

Recommendation 22

Whether through the open University of Ontario or through existing post-secondary educational institutions, new opportunities should be opened for anyone in Ontario who wants to study on a part-time basis.

Recommendation 23

Part-time students should have access to all programs in universities and colleges. Wherever possible, scheduling should be on an extended-day basis with courses offered at different times of the day where duplication is necessary.

Recommendation 24

Students should be able to enrol and withdraw from institutions or attend two institutions simultaneously, without prejudice, so that learning may proceed by the accumulation of knowledge from various sources. With such mixed programs, the appropriate degree-granting authority would be the University of Ontario.

The possibility of secondary-school students also studying part-time at post-secondary institutions should also be envisioned.

Recommendation 25

In order to provide opportunities appropriate to the individual student, fixed and rigid curricula should be abandoned in favour of a flexible approach; patterns of courses leading to various levels of specialization should be described but not made mandatory. Evaluated skills and/or demonstrated proficiency should be allowed as substitutes for prerequisites.

Recommendation 26

The colleges of applied arts and technology should be granted the right to award distinctive bachelors' degrees, such as Bachelor of Technology (BT) and Bachelor of Applied Arts (BAA), to students successfully completing their present three-year programs in the appropriate divisions.

Recommendation 27

The Ontario College of Art should be granted the right to award a bachelor's degree for its present program of

studies (i.e., without an additional year being required).

Recommendation 28

The degrees Doctor of Literature (D. Litt.) and Doctor of Science (D.Sc.) should be established at the following large and centrally-located universities: McMaster, Ottawa, Queen's, Toronto, Waterloo, and Western. These degrees should be awarded on evidence of contribution to our knowledge and understanding of the arts and sciences, both pure and applied, as made by persons who are not regular candidates for an existing degree.

Recommendation 29

The present Grade 13 standard of attainment should be available in 12 years, allowing entry to all forms of post-secondary education after 12 years of schooling.

We anticipate that the recommendations of the Hall-Dennis Report, aimed at achieving a level of academic competence in four rather than five years of high school, will be accomplished. In any event, we view a fifth year of secondary education as being educationally unnecessary and a socially undesirable barrier to wider accessibility of post-secondary education. Much of the social screening that is now attributed to post-secondary educational institutions occurs, in fact, by Grade 9 when the streaming of students starts. By abolishing the thirteenth year, and without diminishing the quality of education, we will be increasing the educational opportunities of our students and decreasing the social distance separating the different kinds of post-secondary educational institutions in our province.

Recommendation 30

Where student intake quotas are for the present unavoidable (probably in medicine and dentistry), admission should be determined on the basis of a lottery conducted among those qualified applicants whose aptitudes and attainments indicate a reasonable probability of success.

Recommendation 31

Admission to professional practice in Ontario should be judged solely on the basis of written and oral examinations and experience. There should be no exception from examinations because of degrees or diplomas held. Re-evaluation every 10 years should be necessary to maintain registration for the purpose of professional practice. The examinations used for initial qualification should be of the same standards as those required for re-evaluation.

Recommendation 31 is intended to increase opportunities for occupational mobility and to lessen any possible abuse arising from the use of formal educational requirements as barriers to such mobility. The skills and abilities required of new entrants into a profession, particularly of those seeking upward movement from sub-professional categories, should not be more onerous than those required for re-establishment of a professional status by those previously admitted.

Recommendation 32

Examinations for admission to all trades and professions should be available in languages other than English where justified or necessary.

There are a number of occupations where this provision would help to increase available services, such as social welfare and some trades where language is no barrier.

Recommendation 33

Legislation should be enacted to prevent discrimination in employment because of attendance or non-attendance at educational institutions. This legislation should reflect certain features of such contemporary human rights legislation as the Act to prevent discrimination in employment because of sex or marital status.[7] In particular, the establishment and maintenance of rigid employment classifications or categories, maintenance of separate lines of progression for advancement in employment, or separate seniority lists on the grounds of educational certificates, should be prohibited.

7 The relevant passages of The Women's Equal Employment Opportunity Act, Chapter 501, Revised Statutes of Ontario, 1970.

> 4. No person shall,
>
> (a) refuse to refer or to recruit any person for employment;
> (b) dismiss or refuse to employ or to continue to employ any person;
> (c) refuse to train, promote or transfer an employee; or

The Commission seriously contemplated recommending an amendment to the Ontario Human Rights Code forbidding discrimination on grounds of educational background. There is much to be said for such a general prohibition and, we are told, at least two western countries have come close to doing so. We definitely approve of the intent and direction of such legislation. However, it is our judgement that such a general prohibition may not be as effective as we would like it to be and could possibly even be counter-productive. We have, therefore, decided to recommend the passing of specific legislation that would accomplish the same end without any of the uncertainties associated with broad and general laws.

Recommendation 34

The achievement of performance criteria in the classroom should take precedence in teacher training over the mere accumulation of course credits at the training institution.

Recommendation 35

In each "professional" area, including architecture, engineering, law, medicine, psychology, social work and teaching, there should be a spectrum of practitioners including specialists, general practitioners, paraprofessionals, technicians, assistants, and aides.

Recommendation 36

There should be ready opportunity for people to proceed through the spectrum of skills and responsibilities represented in each professional area, with specially designed transfer courses which would build on the knowledge already accumulated.

Recommendation 37

Refresher courses should be developed to provide for the continued competence of people operating at all levels. Such courses should be open to people of "lower" levels with full opportunity for their advancement to "higher" levels, on the basis of performance standards similar to those required for re-registration of previously qualified practitioners.

Special programs designed by discipline should be established to provide access to university degrees for graduates of colleges of applied arts and technology and similar institutions. Care should be taken to avoid unnecessary duplication of such programs, but they should be available throughout the province where demand warrants it.

We must break away from the practice of "locking" students into specific programs or institutions. The purpose of Recommendations 34 to 37 is to correct some of the abuses mentioned in the introduction to this set of recommendations and to increase accessibility to professional and employment advancement. At the same time, it is desirable that post-secondary educational institutions should increase their services to those who are already at work.

Recommendation 38

The sex or age of a student should have no bearing on

(d) subject an employee to probation or apprenticeship or enlarge a period of probation or apprenticeship;

because of sex or marital status unless the work or the position cannot reasonably be performed by that person or employee because of sex or marital status.

Discrimination by employment agencies

5. No employment agency shall discriminate against any person because of sex or marital status receiving, classifying, disposing or otherwise acting upon applications for its service or in referring an applicant or applicants to an employer or anyone acting on his behalf.

Discrimination in employment classifications

6. No person shall establish or maintain any employment classification or category that, by its description or operation, excludes any person from employment or continued employment on the grounds of sex or marital status unless the work or the position cannot be reasonably performed by persons of that sex or marital status.

Discrimination in advancement

7. No person shall maintain separate lines of progression for advancement in employment or separate seniority lists that are based on sex or marital status where the maintenance will adversely affect any employee unless sex or marital status is a reasonable occupational qualification for the work.

Discriminatory advertising

8. No person shall publish or display or cause to be published or displayed or permit to be published or displayed any notice, sign, advertisement or publication that expressly limits a position to applicants of a particular sex or marital status.

his or her acceptance into any course of studies, eligibility for financial aid, or rights of access to student centres, housing, and athletic facilities.

Recommendation 39

Commencing in 1972, new appointments to academic positions in universities should reflect the proportion of women receiving Ph.D.s in that year.

Recommendation 40

By 1976, universities in Ontario should achieve a percentage of women holding tenured positions at least equal to the percentage of women holding non-tenured positions in 1971.

Recommendation 41

By 1981, the proportion of male and female faculty at each level in universities in Ontario should at least equal the proportion of males and females receiving doctoral degrees in Canada in 1971.

Recommendation 42

Women employed in the field of higher education should enjoy the same conditions of employment as men. Appropriate promotional procedures should be adopted for women employed in research and part-time teaching.

We are not making specific recommendations on how to deal with discrimination against women at our colleges of applied arts and technology. There appears to be no single process or policy that would correct the situation at these institutions in a manner which would exactly parallel our recommendations concerning the universities. Since the pool of prospective teachers for colleges is far wider, possession of the doctorate (or any equivalent) would be an inappropriate base for correcting any discrimination. We trust, however, that the Co-ordinating Board[8] for the colleges will ensure such fair employment practices and discover procedures to accomplish the same end.

Recommendation 43

Discrimination on the basis of sex in pay, rank, and rate of advancement should be abolished.

8 *See* Recommendations 51 and 53.

Recommendation 44

The biological role of women should be recognized by the provision of maternity leaves, tax relief for child care, and the creation of day care centres.

Recommendation 45

The Ontario Manpower Retraining Program should be open to women who wish to re-enter the labour force but who are at present ineligible on the grounds of the three-year attachment to the labour force requirement.

C. Manpower and Education

An important aspect of post-secondary education is its relationship to the labour market. Paradoxically enough, this relationship is in most cases very tenuous and fuzzy. Experience does not indicate any stable or easily predictable linkage of educational achievement with future employment, except for the strictly controlled, self-governing professions. We apparently do not have a full understanding of the relationship between education and manpower requirements, nor do we have sufficient data even to describe or evaluate such a relationship.[1] Under such conditions it would be difficult and irresponsible to forecast future linkages of education and manpower needs. It is often said that the majority of jobs our current generation of students will have in their lifetime have not yet been invented. Certainly, our history since World War II shows dramatic changes in the occupational structure of our economy as well as great changes in the definitions and requirements within each occupation.

Underlying the difficulties of manpower and educational planning are the structure and values of our society. To co-ordinate the manpower and educational requirements of the economy would demand much greater control of other aspects of our social and economic life than could be justified by any present social consensus. Thus, despite current complaints about the temporary or immediate lack of job opportunities for graduates of post-secondary educational institutions, it is unlikely that either the graduates themselves or the society as a

1 See J. Holland, M. Skolnik, S. Quazi and F. Siddiqui, "Manpower Forecasting and Educational Policy," a background study prepared for the Commission on Post-Secondary Education in Ontario, October, 1971.

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whole would tolerate decreased opportunities for individuals to choose and pursue careers and interests of their own liking.

Nor are the implications of government-ordained quotas very appealing. If the government imposes quotas on enrolment in the name of manpower planning, it is hard to see how it could escape the obligation of guaranteeing jobs at least for those who have been admitted and graduated if not, in fact, for everybody. If the exclusion were based on "manpower requirements" it would follow that the government which ordered the "manpower" quotas would also have to provide "the requirements". Even if it did so, it could hardly perform this service for graduates and not for those who have been excluded from further education and training on these grounds.

An awareness of the difficulties of the present situation and the perils of simplistic solutions should not, however, prevent us from trying to improve our present system. The Commission proposes to do this in four ways: first, by providing better guidance, construed in the broadest sense to include information on long-range employment opportunities; secondly, by linking education more closely to the working life of our citizens; thirdly, by increasing the opportunities for all citizens to return to post-secondary education; and fourthly, by loosening the connections between educational qualifications and employability.

The latter three elements are intended to provide the flexibility needed to face the uncertainties of the future and to allow students to find out what they need to know before taking advantage of post-secondary education at any stage of their lives. Guidance, in turn, is viewed as permeating the whole spectrum of education; its aim is to provide all types of necessary information and advice both to our citizens and to our post-secondary educational institutions. Indeed, we view guidance as the indispensible instrument of the kind of "indicative manpower" planning that is likely to prove most compatible with our social and political values.

If guidance is to perform such vital functions, however, it must be reformed. Perhaps the basic change required may be the separation of guidance from our educational institutions. While much good work has been performed by the present system, it clearly cannot cope with the increased responsibilities that will be imposed upon it in the future. In many instances guidance is confused with counselling; in others, guidance is performed as a second-string type of activity; and, in most cases, it suffers from a lack of reliable information. Many of these shortcomings are due to the inclusion of this service within our educational institutions, where it cannot fail to be of but secondary importance. Also, if our recommendations about the future development of post-secondary education are implemented, many more citizens of all ages will need advice and information about how best to satisfy their educational needs as well as how to relate them to employment prospects. This will demand increased skills and time for guidance activities.

Another reason for the present lack of either an institution or a coherent set of policies that would put guidance where it belongs, in the forefront of our social concerns, is the overlapping jurisdiction of the federal and provincial governments in this field. As in all evolving federal states, it is at times not clear how the legitimate interests of the federal and provincial governments can be reconciled to benefit all citizens. In this case, the Commission thinks the difficulties are even more pronounced; for, while education is by all accounts one of the firmest of provincial jurisdictions, the manpower aspect of our economy is undoubtedly national in scope.

The challenge to the Commission in this area, therefore, was to formulate an increasing and more effective role for guidance within the confines of our constitutional restraints and social convictions. We approached the subject with a number of considerations in mind. First, we wished to recognize the provincial and federal interests. This we have done by our proposal for a nation-wide federal-provincial body, a Canadian Human Resources Commission. This commission would be advisory in nature. Its chief aim would be to sponsor and publish studies dealing with the relationship between federal manpower projections and provincial educational planning pertaining to manpower. Secondly, we are recommending a similarly named body for Ontario. The tasks of this organization would be to offer a broad guidance program and to sponsor and publish studies relating to short and long-term manpower and education requirements in Ontario. Such studies should be of two kinds: one, to increase our understanding of the economy and its relationship to manpower planning and

education, and two, for immediate use in forecasting (if possible) future "excess supply" and "shortages" of graduates in certain fields.

In this connection we contemplated a recommendation that would transfer to the provinces the federal programs under the Adult Occupational Training Act. However, we concluded that a mere transfer would not accomplish our desired goals. As it is, the federal program is narrow in conception and execution; one byproduct of this narrowness is that it funnels large amounts of funds to a limited sector, thereby distorting provincial and local priorities. Moreover, the operation of the program poses many problems: it creates an artificial gap between "adults" and young unemployed; it encourages palliative rather than fundamental long-term treatment of problems; and it leaves unnecessary and undesirable arbitrary power in the hands of Canada Manpower Centre counsellors. Most fundamentally, however, the program cannot be properly operated because of the constitutional arrangements mentioned earlier in this section. Therefore, it seems quite clear that the most feasible solution to the problem of inadequate employment opportunities must be sought at the community level through closer liaison and co-operation between those providing the training and senior management in the business world.

Without making a final recommendation in this area, then, we favour a clearer articulation of a provincial manpower policy that would allow the Government of Ontario, in co-operation with other provinces and the federal government, to improve the serious shortcomings of existing efforts. We think that our recommendations will be consistent with such an approach.

In the field of guidance, the Ontario Human Resources Commission would take over the administration of the tasks now performed by the educational institutions and would enlarge its sphere of activities to provide guidance services for all citizens, on the campus as well as in the community. Obviously, it could perform this function satisfactorily only if it were supplied with all necessary information pertaining to manpower projections and education.

Recommendation 46

The federal and provincial governments should co-operate in establishing a Canadian Human Resources Commission, with the following jurisdiction:

a. to advise the federal and provincial governments on matters pertaining to manpower projections and related educational planning;

b. to sponsor and publish studies on manpower predictions and educational planning.

Recommendation 47

An Ontario Human Resources Commission should be established with the following characteristics and jurisdiction:

a. *Composition:* apart from a permanent chairman, members of the Human Resources Commission should be drawn from the members of governmental service, educational institutions, industry, labour, cultural organizations, and professional associations;

b. *Functions:*

i. Advisory: to the Government of Ontario on any matters pertaining to guidance;

ii. Executive:

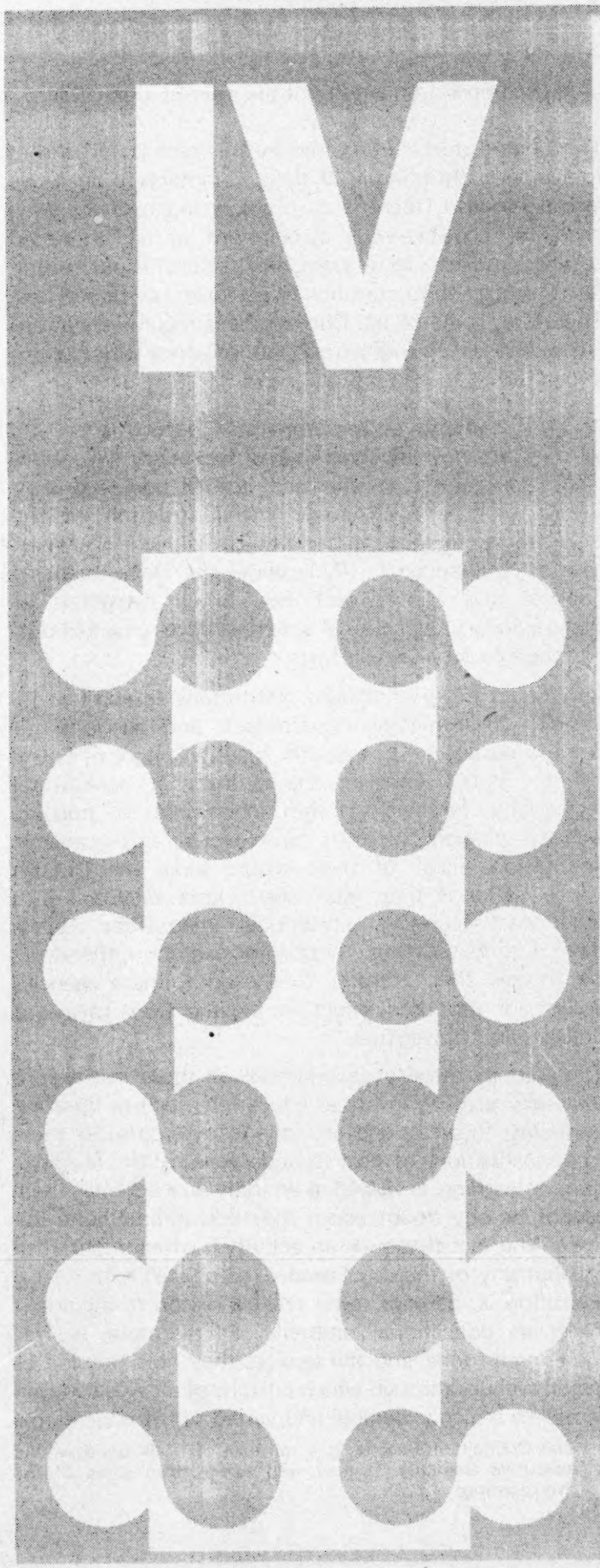
1. to administer all government-supported guidance programs in the province of Ontario;

2. to sponsor and publish studies on relevant areas of its interest.

Recommendation 48

Counselling and guidance services should be made available to all adults wishing to participate in continuing education. Such services should be available in all public libraries. More emphasis should be placed on activity at the community level through the establishment of community boards advisory to the proposed Ontario Human Resources Commission.

Instruments of Implementation



A. Structure

The basic problem in determining the proper role for government in post-secondary education is to reconcile the public interest with the appropriate degree of institutional autonomy that will permit the diversified, flexible and open system of education which we desire. Considerations of public accountability require that government be assured that public funds for post-secondary education are being spent efficiently and effectively. At the same time we must be certain that the principle of public accountability is not translated into uniform bureaucratic controls which would stifle the diversity and flexibility of post-secondary education that we also demand.

The problem of bureaucracy is not peculiar to post-secondary education; it permeates most of our social endeavours—and is far from being brought under control. But in post-secondary education, the need for diversity and flexibility, both of which suffer under bureaucratic control, is not only desirable; it is essential. It makes no sense to attempt to create or safeguard a pluralistic and individualistic society if we are to have homogenized institutions of learning. In the past, we have been able to avoid this particular danger by granting our institutions a considerable degree of independence from the authorities of the state. Changing circumstances obviously make the retention of the same amount of independence unlikely.

The immediate cause of these changing circumstances is the increase in the number of people attending and working in post-secondary education and the increase in the public funds allocated to support these activities. As Appendix D shows, attendance in Ontario post-secondary educational institutions has increased greatly between 1951 and 1971. In the same period, public support of post-secondary education increased even more rapidly.

The government's growing interest in post-secondary education, therefore, has been stimulated by at least two considerations: first, by the inevitable concern with the efficient allocation of public funds and, secondly, by the increasing importance of post-secondary education in our society. The Ontario government's intervention in this area was accomplished with remarkable restraint and ingenuity. The creation, practically ***de novo,*** of our

innovative system of colleges of applied arts and technology, the creation of the Department of University Affairs, and the development of imaginative policies (such as the formula financing system), to cite but a few examples, have established the government's role in post-secondary education without destroying the vital independence of our institutions. This achievement is all the more noteworthy because it took place in an area where the government did not have any previous experience of large-scale intervention and was surrounded by examples (such as those of certain jurisdictions in the United States) which it did not wish to emulate.

The relationship of the Ontario government to post-secondary education has been characterized by several traits. The government has accepted the proposition that it should separate itself from post-secondary education and its activities by a "buffer". This "buffer" has taken the shape of advisory bodies—the Committee on University Affairs and the Council of Regents—which advise the Minister on the basic policies affecting most of the post-secondary educational institutions in Ontario. Because of the advisory nature of these bodies, their powers and jurisdictions were not stipulated in statutes.[1] Although this was understandable during a period of rapid expansion, it has also led to some uncertainty as to which aspects of post-secondary education the government considered to be of direct "public" interest and which belonged within the jurisdictions of the institutions themselves. Since future expansion is likely to be less rapid, it is our view that both the government and the institutions will be better able to solve future problems if these areas of responsibility are more clearly delineated.

Another element in the relationship between government and post-secondary education has been associated with the development of a broad and complex set of voluntary, province-wide associations which now represent our educational institutions, faculties, and students and which often serve as intermediaries between the organs of the government and the individual institutions. Much that elsewhere was accomplished only by direct government intervention has been achieved in Ontario by these associations, either through voluntary co-operation among the educational institutions themselves or through co-operation with the appropriate governmental agencies. Much of the credit for the peaceful and orderly transition from elite to mass post-secondary education in Ontario undoubtedly is due to this almost unique co-operation among all the interested parties.

The Commission is impressed by this record and wishes to see the continuation of these voluntary co-operative efforts. Indeed, there is an obvious and overwhelming need for province-wide associations of all interested parties (students, faculty, and institutions) if our consultative process is to continue to perform its vital services. Therefore, some of the Commission's recommendations are aimed at strengthening the province-wide associations and the consultative process.

A great variety of governmental departments and agencies are now involved in post-secondary education. While the major components of formal post-secondary education have been under the jurisdiction of the Departments of Education and of University Affairs (and since October 1, 1971, under the Department of Colleges and Universities) two broad categories of post-secondary educational activities have remained outside their co-ordinating efforts.

The first category includes institutions established by various governmental departments and agencies for specific purposes, such as the Niagara School of Horticulture, police colleges, the colleges of agricultural technology, teachers' colleges and schools of nursing. Due to changes in their professional and academic orientation, most of these would serve the Ontario public better if they established closer relations with other post-secondary educational institutions. Unless there is some overriding reason for exclusion, therefore, we foresee their transfer to the appropriate agencies under our proposed structure for the Department of Colleges and Universities.

The second category encompasses all those institutions that now provide informal education, such as libraries, museums, theatres, and art galleries. We consider these to be institutions of post-secondary education. If education, or learning, is viewed as an individual activity, there cannot be any doubt about their educational contributions. The fact that such an activity is often undertaken without any of the usual rewards associated with formal education is, perhaps, even greater reason to include it under an educational umbrella. Furthermore, we see these institutions, and the services they now provide, as major avenues through which citizens of all ages can gain access to a highly flexible and varied set of educational

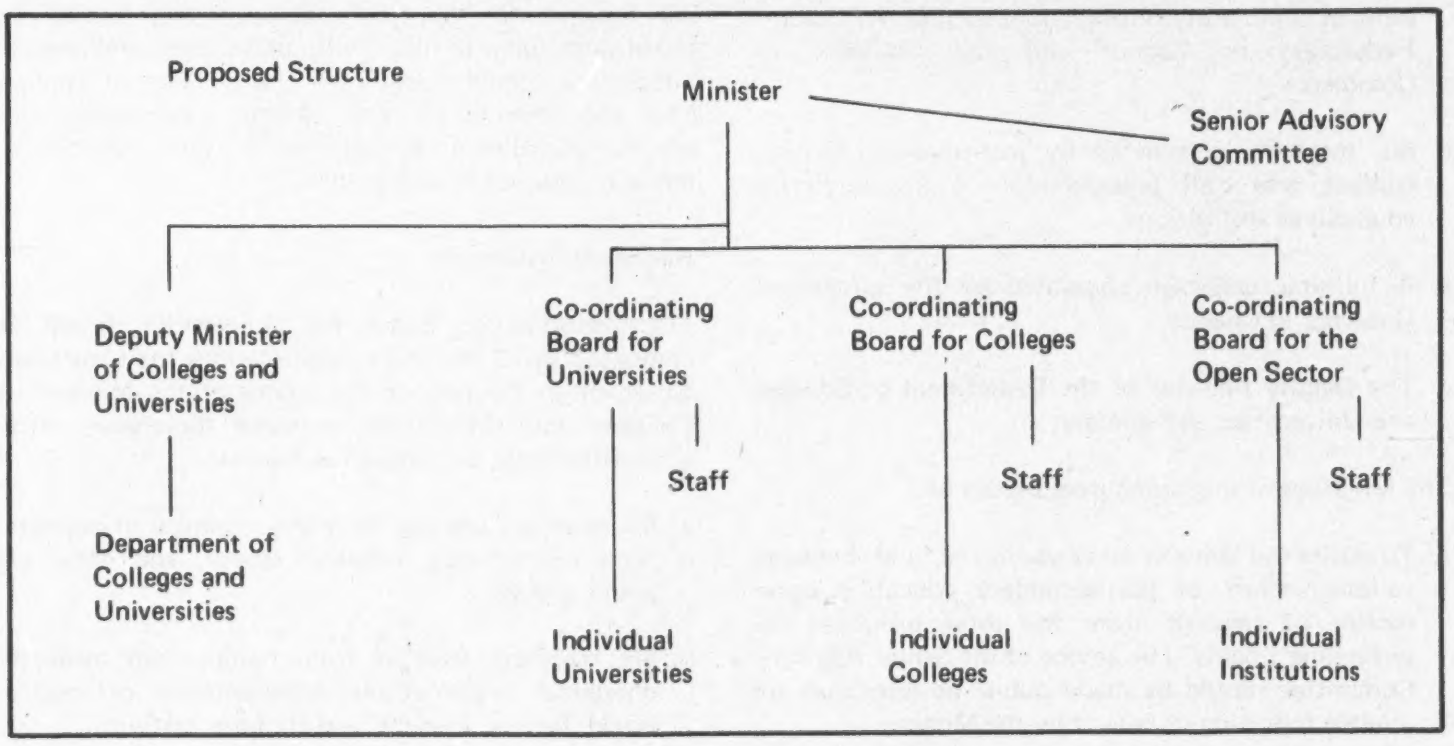
1 The Council of Regents is a mixture of both advisory and executive elements. It may well suffer from some of the shortcomings of both.

experiences. To emphasize these two aspects of their service, we have called this segment of post-secondary education the "Open Sector".

The Commission therefore recognizes "post-secondary education" as only a convenient term to describe a host of disparate activities. To prevent bureaucratic homogenization of these activities, we have divided the spectrum into three broad areas and recommend the establishment of a co-ordinating board for each. These co-ordinating boards are being proposed on the assumption that the main area of public concern—the effective attainment of goals and the efficient use of public resources—can be best achieved through improved co-ordination and planning. These province-wide bodies would be semi-independent governmental agencies, with sufficient executive powers for their purposes, responsible to the legislature through the Minister of Colleges and Universities.

The time has come for clear definition of the jurisdiction and responsibilities of the various component elements of post-secondary education and their incorporation in appropriate legislation. We realize that the best safeguards against bureaucratic control are an informed public and an alert legislature. Therefore we urge that, subject to the usual matters of business and personnel confidentiality, proceedings, appointments, and decisions at all levels throughout post-secondary education be open and subject to public scrutiny. Finally, we have assumed the continuation and, especially in the case of students, the strengthening of province-wide voluntary associations and their activities.

The Commission also proposes a series of recommendations to shape the internal administrative structure of our post-secondary educational institutions. Most of these are reiterations of recent reports (such as the Duff-Berdahl Report on University Government, the Report on the Ontario College of Art, and the Report of the University of Toronto's Committee on University Government) or reflect present trends of development. Thus we are in favour of open decision-making on institutional levels, and we support the increased participation of faculty and students in that process. It should also be pointed out that increased faculty and student participation in decision-making at the institutional level must be accompanied by more concerted efforts of the lay and public representatives to scrutinize the demands of faculty and students. If the degree of institutional independence is not to be drastically curtailed and public accountability not translated into centralized control, such public participation must become more effective than it has been in the past.



Recommendation 49

All provincial support for post-secondary education should be funded through a single government department. The definition of post-secondary education should include the following institutions or groups: universities, colleges of applied arts and technology, agricultural and trade colleges, schools of nursing, museums, theatres, art galleries, science centres, libraries, and similar institutions.

Post-secondary education should encompass the whole gamut of educational services. The allocation of funds through one department would permit more reasonable and balanced comparisons, appraisals, and choices among programs.

Recommendation 50

A Senior Advisory Committee should be established to advise the Minister on matters pertaining to post-secondary education in Ontario. The 13 members of the Committee should be appointed by the Lieutenant Governor in Council, on the advice of the Minister, to serve three-year, once-renewable terms. The Committee should be constituted as follows:

a. Six members of the public, selected from the nominations of community organizations such as the Ontario Federation of Labour and the Chamber of Commerce.

b. Six members nominated by institutional, faculty, student, and staff organizations of post-secondary educational institutions.

c. A full-time chairman appointed by the Lieutenant Governor in Council.

d. The Deputy Minister of the Department of Colleges and Universities, as Secretary.

The functions of this Committee should be:

a. To advise the Minister on allocation of funds between various sectors of post-secondary education upon receipt of requests from the three proposed co-ordinating boards. The advice of the Senior Advisory Committee should be made public no later than six months following its receipt by the Minister.

b. To publish annual reports dealing with the entire range of post-secondary education in Ontario, and to publish any other reports on post-secondary education that it deems of value and interest.

c. To hold regular public hearings on post-secondary education throughout Ontario.

This Committee is the institutional embodiment of the Commission's desire to provide a continuous overview of post-secondary education in Ontario and to provide the Minister with advice on the allocation of funds between the three main sectors within his jurisdiction. It is our conviction that such an overview is best supplied by an advisory body without executive powers and unencumbered by a large bureaucracy. Moreover, such a body would counteract any tendency on the part of the co-ordinating boards to ignore other segments of post-secondary education—a corrective that no executive body is likely to provide. By holding public hearings and publishing reports, the Senior Advisory Committee on post-secondary education can also draw attention to new needs and stimulate appropriate responses on the part of individual institutions and the co-ordinating boards.

Recommendation 51

We recommend that three co-ordinating boards be established, one to deal with universities and similar institutions, one to deal with the colleges of applied arts and technology and similar institutions, and one to co-ordinate the activities of the Open Sector (libraries, museums, and the like).

Recommendation 52

The Co-ordinating Board for Universities should be composed of 13 members, appointed by the Lieutenant Governor in Council on the advice of the Minister of Colleges and Universities to serve three-year, once-renewable terms, and chosen as follows:

a. Six members selected from the nominees of organizations representing industry, labour, and other lay public groups.

b. Six members selected from nominations made by provincial organizations representative of institutional, faculty, student, and staff associations.

c. A full-time chairman, appointed by the Lieutenant Governor in Council on the advice of the Minister of Colleges and Universities.

d. No president or vice-president of a university or similar institution should be appointed to it.

Jurisdiction:

a. To establish new faculties and programs and discontinue unnecessary faculties and programs, at both the graduate and undergraduate level.

b. To establish a general admissions policy for the institutions under its jurisdiction.

c. To distribute operating and capital funds among the institutions.

Policy:

a. The Co-ordinating Board should hold public hearings from time to time at the institutions under its jurisdiction.

b. The proceedings of the Co-ordinating Board should generally be public, and held *in camera* only when the transactions are confidential or immediately prior to giving advice to the Minister. The minutes of all meetings should be made public.

c. The Board should distribute funds for educational purposes on an objective formula basis for both operating and capital grants. If major changes are proposed, public hearings should be held to justify them.

d. The Board should award five per cent of its operating grants budget for innovation in educational programs and policies. Such grants should not persist for more than five years. Following this period, successful innovations and experiments should be viable on the basis of ordinary support.

The purpose of Recommendation 52 is to provide for a province-wide co-ordinating and planning body for the universities. Executive powers are necessary to ensure such co-ordination and to stimulate voluntary co-operation in other fields. The clearly delineated powers should make it possible for the Board to establish stable relationships with individual institutions. While the co-ordinating board structure may appear to some as another name for a "University of Ontario", we reject such comparisons. Experience in multi-campus jurisdictions shows that a single governing board for whole systems leads to bureaucratization and homogenization. The powers of the three proposed co-ordinating boards are specifically intended to preclude such developments.

The system of representation proposed is intended to safeguard the public interest, and the exclusion of presidents and vice-presidents is designed to prevent any possible conflicts of interest or, for that matter, invidious suspicions. We deemed it inappropriate that members of the academic community (students, faculty, and administration) should have a majority on such a body, because the public interest must remain paramount. The noteworthy departure of these recommendations is, of course, the delegation of executive power to a province-wide body. It would be the first time in Ontario that the interest of the public would be represented in university affairs on such a broad basis. In essence, this set of recommendations asserts that it is in the public interest to co-ordinate and plan university education on a province-wide basis; that it is, more specifically, the right of a province-wide body to decide where and when new programs (graduate as well as undergraduate) should be established and/or abolished, and what kind of admission standards should prevail in the province; and that these decisions are best made by a body that is not an integral part of a government department.

Recommendation 53

The Co-ordinating Board for colleges and related institutions should be composed of 13 members, appointed by the Lieutenant Governor in Council on the advice of the Minister of Colleges and Universities to serve three-year, once-renewable terms, and chosen as follows:

a. Six members selected from the nominations of organizations representing industry, labour, and other lay public groups.

b. Six members selected from nominations made by provincial organizations representative of institutional, faculty, student, and staff associations.

c. A full-time chairman, appointed by the Lieutenant

Governor in Council on the advice of the Minister of Colleges and Universities.

d. No president or vice-president of a college or similar institution should be appointed to it.

Jurisdiction:

a. To establish new divisions and programs and discontinue unnecessary divisions and programs.

b. To establish a general admissions policy for the institutions under its jurisdiction.

c. To distribute operating and capital funds among the institutions.

Policy:

a. The Co-ordinating Board should hold public hearings from time to time at the institutions under its jurisdiction.

b. The proceedings of the Co-ordinating Board should generally be public, and held *in camera* only when the transactions are confidential or immediately prior to giving advice to the Minister. The minutes of all meetings should be made public.

c. The Board should adhere to the general distribution of funds on an objective formula basis for both operating and capital grants. If major changes are proposed, public hearings should be held to justify them.

d. The Board should award five per cent of its operating grants budget for innovation in educational programs and policies. Such grants should not persist for more than five years. Following this period, successful innovations and experiments should be viable on the basis of ordinary support.

At present the administration of colleges of applied arts and technology and similar institutions is much more centrally controlled than that of the universities. Probably for historical reasons, much of the central structure, even the nomenclature of the former Applied Arts and Technology Branch in the Department of Education, resembled the secondary school system. Yet, as the creation of the Council of Regents and local institutional boards of governors shows, it was also hoped to decentralize the actual administration and to focus the attention of central organs on matters of province-wide policies. The Commission is convinced that the original intention, to balance decentralization with a degree of central co-ordination, was valid; our recommendations are aimed at strengthening that balance.

This conviction is also reflected in Recommendations 55 to 59, dealing with the internal structure of authority within these institutions. It seems only appropriate that college students, faculty, and administrative staff should have similar opportunities to determine local conditions and program content, as have their counterparts at universities.

The Commission realizes, of course, that in both cases (relating to the universities as well as the colleges), there will be need for transfers of staff from the presently constituted governmental departments to the co-ordinating boards.

Recommendation 54

The Co-ordinating Board for the Open Sector should be composed of 13 members, appointed by the Lieutenant Governor in Council on the advice of the Minister of Colleges and Universities to serve three-year, once-renewable terms, and chosen as follows:

a. Six members selected from nominations made by public organizations representing industry, labour, and other lay public groups.

b. Six members selected from nominations made by representatives of the institutions themselves.

c. A full-time chairman, appointed by the Lieutenant Governor in Council on the advice of the Minister of Colleges and Universities.

d. No president, vice-president, or equivalent administrator of a public cultural institution should be appointed to the Board.

Jurisdiction:

a. To distribute operating and capital funds among the institutions.

b. To establish new programs and activities, including the University of Ontario (*see* Recommendation 21), and discontinue unnecessary programs.

Policy:

a. The Co-ordinating Board should hold public hearings from time to time at the institutions under its jurisdiction.

b. The proceedings of the Co-ordinating Board should generally be public, and held *in camera* only when the transactions are confidential or immediately prior to giving advice to the Minister. The minutes of all meetings should be made public.

c. The Board should seek to establish and adhere to the general distribution of funds on an objective formula basis for both operating and capital grants.

d. The Board should award five per cent of its operating grants budget for innovation in programs and policies. Such grants should not persist for more than five years. Following this period, successful innovations and experiments should be viable on the basis of ordinary support.

Accessibility and diversity of post-secondary education have been accepted by the Commission as desirable goals of our system. Previously, in our interim ***Statement of Issues,*** we raised the question of the artificial separation that exists between what goes on within our institutions and what goes on outside the walls of our classrooms and labs. Our aims in this recommendation are to bridge this gap; to provide the mechanism for increased participation of libraries, museums, etc. in post-secondary education; to increase the accessibility to learning for all citizens; and to facilitate the necessary co-ordination and planning of these facilities, as well as their funding, by a province-wide body.

The Commission views this last recommendation as among its most important. Not only are there educational potentials, untapped resources, and opportunities for savings (both to the individual and to government) in our cultural institutions, and agencies such as the Province of Ontario Council for the Arts, but there are also sources of innovation. Insofar as educational and cultural activities overlap, the benefits that both kinds of institutions can derive from closer co-operation are bound to increase the quality of life of the community generally. Indeed, to break down the artificial and, at times, social barriers between educational institutions and the communities within which they operate, or to achieve a closer integration of our educational and cultural activities, has been one of our chief aims (***See*** Chapter II: Aims and Objectives). Providing our cultural institutions with a central agency should facilitate both the co-ordination of their own efforts and the necessary institutional framework for co-operation with the other two sectors of post-secondary education.

We do not make as many specific recommendations for this sector as we do for other elements of post-secondary education. The reasons are fairly simple. We are aware that this proposal to co-ordinate the activities of all the cultural institutions of Ontario (including the proposed University of Ontario) is far-reaching and has many implications. While we gave it considerable thought, there was neither time nor all the necessary information available to analyze these implications in detail. Moreover, we think that implementation of this recommendation will require the active co-operation of all the institutions involved.

There are, of course, some suggestions that the Commission wishes to make public, though it hesitates to recommend them specifically. One of these is the desirability of establishing some "objective" criteria for the distribution of funds in this sector. This, admittedly, is a difficult problem, but not an impossible one. Secondly, there is the need to develop criteria upon which all citizens who have not previously received or completed any post-secondary education would be eligible for public support in order to pursue individually and collectively prepared educational plans and projects. (***See*** Recommendation 62).

The Commission was impressed by the ability of our citizens to provide and seek educational services on their own as well as through established institutions. For example, there are many instances of communities and groups taking the initiative to create adult education programs. Frequently such enterprising and socially useful efforts fail because of the absence of even minimal public financial support, yet comparable achievements through established institutions would be purchased at far greater costs.

The difficulty, of course, is an old and persistent one: how can we provide public funds on an intermittent and periodic basis without appearing either arbitrary or rigidly bureaucratic, thereby deadening initiative and repelling those who could benefit or contribute most? We suspect that this is the area in which the Co-ordinating Board will have to focus its greatest ingenuity and efforts.

Recommendation 55

In the governance of provincially assisted institutions there should be direct and significant representation on governing bodies of students and faculty. Meetings of such bodies, as well as budgetary and other information, should be open. Such governing bodies should hold public hearings on some regular basis. In order to provide for the representation of community interests, such hearings should be held, on occasion, in the various communities served by the institution. Reports and financial statements for each institution should be tabled in the provincial legislature.

Recommendation 56

For the sake of diversity, the evident trends towards at least three models of university and college governance in the province should be recognized by the province:

(a) reformed bicameral systems, with some interlocking membership, including faculty and students represented on the Board, as well as students and board members represented on the Senate; (b) boards of trustees, i.e. overseers; (c) unicameral governing bodies, combining the functions of board and senate.

The traditions and diversity of institutional arrangements should be safeguarded wherever possible. Often this will demand that the means through which new developments occur, such as increased participation by students and faculty in decision making, will have to differ from institution to institution. Rigid conformity to one pattern would not serve any useful purpose and might, in fact, destroy both the diversity and the prospects of participation. For this reason, therefore, the Commission thinks it desirable to allow each institution to find a structure that would correspond to its purposes and traditions, as well as to accommodate increased participation. In the case of the colleges of applied arts and technology, a new omnibus Bill may be required to encourage this diversity.

Recommendation 57

Not more than one-third of the lay members of governing bodies of universities and colleges should be "self-perpetuating", with the balance appointed by other agencies, such as the Lieutenant Governor in Council, alumni, or city council.

Recommendation 58

All vestiges of *in loco parentis* rules should be abolished.

The purpose of Recommendation 58 is clear. As one of the residual features of a time when students were minors, mainly from the privileged upper classes, the *in loco parentis* rules no longer have any utility in our days. It is also the Commission's hope that even the informal but special privileges of students before civil authorities, which often accompanied institutional parietal rules, will also be discontinued.

Recommendation 59

Students, faculty, and institutions should develop and/or maintain existing voluntary provincial associations to provide a basis for the expression of views of such constituencies on a province-wide basis.

As we have already stressed, the active co-operation of all interested parties in making decisions pertaining to post-secondary education is essential. Much of this co-operation depends on the ability of the interested parties to articulate and convey their views to the government and its agencies. To perform this task, the already well-developed provincial organizations representing institutions and faculty (at least for the universities and colleges) should be encouraged, as should the student organizations, which have been either weak or non-existent. We view the re-establishment or strengthening of province-wide student organizations as one of the most useful ways through which students can influence policy-decisions.

Recommendation 60

Proper procedures and policies affecting appointments, promotions, and dismissals should be worked out in detail by the institutions and their employees.

Underlying Recommendation 60 is the Commission's

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concern with academic freedom and tenure. Much has been written about both, often with more passion than reason. It seems to us that academic freedom and tenure can become meaningless slogans offering little protection to the faculty from improper dismissal or to the students from incompetent teachers. Proper procedural safeguards, therefore, are required. In particular, these must include provisions of due process and protection against double jeopardy. Granted their establishment, perhaps the interested parties can then take a more dispassionate look at the provision of tenure.

B. Financing of Post-Secondary Education in Ontario

There are three interrelated issues facing us in matters of financing post-secondary education. One is a question of costs: what are we in fact paying for in post-secondary education and how much should we pay for it? Secondly, who should pay these costs: the individual, the public, or both? Thirdly, and assuming that the public will continue to pay some portion, how should the public subsidy be arranged?

It is necessary to distinguish between the elements of post-secondary education that are inherently costly and those that are susceptible to modification. One of the former is the labour-intensive character of education. Moreover, most of the labour is very highly trained—it is, after all, our scientists, doctors, and scholars who teach in the universities. Therefore, if we ask our post-secondary educational institutions to remain "human", to keep reasonable faculty/student ratios, we must expect these labour costs to remain high or even to increase.

Of course, as always in times following rapid expansion, we can now see that we may not have paid enough attention to possible economies of operation. In our desire to satisfy the demand for post-secondary education, we have often overlooked other ways of providing the educational services needed. One reason for this has been quite simply a general lack of awareness of the costs involved. By providing most of our public support to post-secondary education in the form of institutional grants, we have hidden the actual amount of subsidy our students are receiving and we have obscured the declining and often inconsistent significance of tuition fees (***See*** Tables IV-1 and IV-2). And, consequently, concern about possible economies has been lessened. This, in turn, has made attendance at post-secondary institutions more attractive, though not necessarily more socially useful or individually productive, than would have been the case had everyone concerned been more aware of the real costs involved.

Moreover, because our concern for enlarging educational opportunities has led us to finance institutions on the basis of numbers, we have also made the institutions themselves less anxious about total costs. And, of course, the professoriate's search for professional prestige was too often associated with the expansion of graduate studies, a development that seemed possible only on the basis of an increased number of students.

The result of these and other influences, such as those exerted by professional associations for increased educational attainments, has been a comparative neglect of the total and unit costs of post-secondary education. Though the increases have not been as dramatic as some have charged, or as great as in other sectors of public service (Table IV-3), it is necessary to provide incentives to encourage all participants in post-secondary education to seek greater economies.

Most importantly, we must begin to search for alternative ways to deliver post-secondary educational services. The Commission is recommending a number of such alternatives: easier access to professions, to degrees, to transfers, to tests, and to the whole range of post-secondary educational services. The development of such alternatives should provide not only increased accessibility to post-secondary education for students from all income groups and a broader spectrum of ages, but also a more competitive situation with respect to the costs of providing such educational services.

However, the heart of the cost problem lies in the structure of unit costs: how we deliver our post-secondary educational services and what we consider to be the appropriate elements of these services. In post-secondary education this determination will largely hinge on how we incorporate or reconcile the cost of research and the cost of education. The solution to this problem is not likely to be found in philosophical or theoretical discussions about the role of research in higher education, nor, for that matter, in attempts to

discover the true nature of teaching-related and other kinds of research. The literature of post-secondary education is full of inconclusive arguments on this subject. The reason for this impasse is that we are dealing here with two seemingly contradictory observations.

Table IV-1

All Universities in Ontario
Operating Income Plus Student Finance

	1951-52	1961-62	1970-71
Total full-time enrolment	23,000*	35,900*	116,800**
Tuition fees	$5.9m†	$17.9m†	$64.2m†
Total ordinary operating income	11.6m	$39.2m††	$544.0m‡
Tuition fees as a percentage of total operating income	51%	45.7%	11.8%

* Statistics Canada, Census of Canada, 1951 and 1961.

** *Report of the Minister of University Affairs 1970-71,* Tuition fees are based on a formula-fee basis, using a median fee and multiplying by enrolment.

† Statistics Canada, *Survey of High Education,* Part II.

†† Statistics Canada, *Canadian Universities Income and Expenditure, 1967-68.*

‡ No official figures are available at this time. This is an estimated figure.

Note: m – millions

Table IV-2

Fees and Grants by Program Types
Ontario Universities and Colleges
(for two academic semesters, 1970-71)

Enrolment category	Total institutional income per student* $	Grant per student $	Average student fee $	Fee as a percentage of income
Universities				
Undergraduate and first degree				
General Arts and Science	1,650	1,170	480	29
Honours Arts, Commerce, Law	2,475	1,995	480	19
Engineering, Architecture, etc.	3,300	2,755	545	16
Med-Basic Science, Clinic	8,250	7,575	675	8
Graduate				
M.A., M.B.A.	3,300	2,865	435	13
M.Sc.	4,455	4,020	435	10
Ph.D.	6,600	6,165	435	6
Colleges of Applied Arts and Technology				
Applied Arts, Business	2,325	2,175	150	6
Technology	2,840	2,690	150	5
Applied Health	4,700	4,550	150	3

* Institutional income figures per student for university programs are as given by the Ontario Operating Grants Formula. Institutional income per student for the colleges of applied arts and technology are averages of actuals for 1970-71. The high unit costs reflect small enrolment in many new programs.

We insist that post-secondary education at the university level is inseparable from research; at the same time, we are also aware that it is irrational to make all or most of our support for research dependent on the number of students. Undoubtedly, some research is related to teaching; some is of general, cultural and social value; some is more of a service to industry, government, and other agencies. If we wish to shift some of the cost to students who can afford to pay, we must be sure that the cost in question is indeed the cost of their education. To ascribe to education costs that properly belong to other services would be both unwise and unfair, yet this is exactly what we are doing at present when we complain about the high cost of professional and graduate education. If we wish, for example, to support medical research and development, it certainly should not be done on the basis of numbers of students in medical schools but on the basis of our estimate of how much we value and need such work.

Therefore, it is quite clear that both the way we look upon the cost of post-secondary education and the way we provide subsidies affect the allocation of the burden of these costs. At present the public pays more than 86 per cent of the operating cost of educational institutions, with the remaining percentage covered by fees collected by the institutions from the students. Capital costs are almost totally covered by public funds. The public subsidy takes the form of grants to the institutions. As Table IV-2 shows, the fee scales hide considerable differences between programs. As a rule, it can be said that the longer the student stays in university, the larger the average public subsidy—in other words, each additional year is more expensive; furthermore, the higher average costs are associated with professional training, the greatest being in those professions that show greatest returns to individual graduates in professional earnings.

Table IV-3

Trends in Operating Expenditures*

	1961-62 $	1971-72 $	Average rate of increase, percentage per annum (current dollars)	Average rate of increase, percentage per annum (constant 1971 dollars)
Total operating cost per public elementary and secondary school student	269	788†	11.3	7.7
Total operating cost per average full-time undergraduate and graduate student in provincially assisted universities	1,425	3,600†	9.7	6.2
Total operating cost per patient per day in public general hospitals**	24.34	62.40†	9.9	6.4

* No data is presented for the colleges of applied arts and technology because of their short history. Some qualifications are needed for the data shown. Most importantly, the mix of services in 1971-72, in each case, is different from that in 1961-62 so that the comparisons are between activities that are not the same. For instance, over the decade the proportion of secondary to elementary enrolment in schools increased, and the proportion of university students working at advanced levels also increased. In hospital care, similar shifts have occurred.

** Annual Report, Statistical Supplement, Ontario Hospital Services Commission 1961.

† Estimated.

In view of these facts and our desire to achieve a more equitable distribution of costs, it would be tempting to rearrange the distribution so that those who benefit most would pay a larger proportion of the cost. Before we attempt this, however, a number of observations should be made. First, much of the cost of present graduate and professional training is the cost of research. Both on educational and administrative grounds, the Commission became convinced that, rather than engage in a detailed analysis of each case, it would be desirable to change the way we finance research in educational institutions. Secondly, the high returns received after professional training are not actually due to any particular kind or length of training; they are due, in large part, to the self-governing character of the professions. The "returns" to the professions are less returns to education than the price of professional services—and much of the cost of these services has been determined, so far, by unilateral fee-setting. There is a strong possibility, therefore, that any shift in the cost of professional training would be largely passed on to the consumers of the professional services. The justification

for such a shift is convenient and traditional: members of a profession have to charge more money because of the high cost and length of their training.

The Commission, therefore, has approached this problem from two sides: first, we support and reiterate many of the recommendations made by other commissions and committees dealing with the problem of publicly licensed and monopolistic professions that have sought, by providing better public representation, to make professional licensing bodies more responsive to social needs.[1] Secondly, we believe that accessibility to professional training and education should be increased by providing easier horizontal and vertical mobility.

One consideration affecting our judgement on the distribution of the cost-burden and on how we should provide public subsidies in post-secondary education is the principle of accessibility.[2] Though there may have been sceptics from the very beginning, it has generally been accepted that one way to increase accessibility to post-secondary education is to make it as "free" as possible. However, while our increased public subsidy does have some influence on accessibility to post-secondary education for students from lower-income groups, it does not solve the problem. In fact, because the public subsidy is general (supporting ***all*** students simultaneously by subsidizing institutions rather than students), we have increased the public subsidy to all students regardless of their family background.

We believe that the extension or continuation of this degree of universal subsidy would be unwise. Generalized, "free" post-secondary education would not itself solve the problem of accessibility—students from lower-income familes would continue to be under-represented in post-secondary education. It would also be very costly. Therefore we conclude that a new, more selective form of subsidy should be provided for those who come from lower-income families. These subsidies, moreover, must include the cost of maintenance. By the same token, we should also stop subsidizing those who do not need it.

The second consideration is flexibility. It is generally conceded that "consumer's choice" is more influential if backed by purchasing power. By allowing the student to "purchase" more of his education rather than giving it to him "free", student decisions as to what to "buy" would help our institutions (and the proposed alternatives to traditional institutions) to provide educational services that are more in keeping with what is really wanted. To accomplish this, of course, the established institutions will have to be flexible. This flexibility, we suspect, will have to extend to the acceptance of student evaluation of their teachers.

Any financing scheme will also have to acknowledge the recent decision, in Ontario and elsewhere, to lower the age of maturity to 18 years. This move will have to be reflected sooner or later in the regulations affecting student aid. Yet, whatever merit there may be in allowing young men and women of 18 to vote and drink, it does not follow that they will thereby also become financially independent. It cannot be argued with any seriousness that, in a scheme designed to help students from poor families, parental income should be disregarded once the student has reached 18 years of age. Few if any students at post-secondary educational institutions would then be ineligible for whatever public support would be available. Thus it would seem that the inclusion of parents' income and wealth in judging the award of grants will remain necessary.

In summary, then: the Commission concludes that we need a new method of providing the public subsidy to post-secondary education; that this new method must attempt to separate, at source but not at the institutional level, instructional costs and other costs including research; that the distribution of the cost for ***educational*** services between the individual student and the public could be more equitably and reasonably distributed; and that additional efforts should be made to provide financial support to those students who come from lower-income families. We believe that the proposed reform of financing should reflect not only these conclusions but should also protect and preserve all the attributes of post-secondary education that are necessary for the accomplishment of all its educational and appropriate social functions.

1 ***Report of the Royal Commission Inquiry into Civil Rights*** (Toronto, Queen's Printer, 1969, Vol. II). ***Report of the Committee on the Healing Arts,*** (Toronto, Queen's Printer, 1970, Vol. 3, 82-3). ***See also*** Chapter III Prospects for Change, Accessibility.

2 "Cost and Benefit Study of Post-Secondary Education in the Province of Ontario, School Year 1968-69," a study prepared by the Systems Research Group for the Commission on Post-Secondary Education in Ontario.

See also W. Lee Hansen and Burton A. Weisbrod, ***Benefits, Costs, and Finance of Public Higher Education***, Markham Series in Public Policy Analysis (Chicago, Markham Publishing Company, 1969).

The pattern of financing that we are proposing in our recommendations is then developed as follows:

1. We have taken the structure of the present "unit cost" (as reflected in the basic income unit)[3] as given. In Appendix E, we show the typical categories of instructional effort (class sizes, teaching loads, etc.) associated with the present unit-cost structure. Behind these items lies the present distribution of educational, research, and other efforts. For reasons noted earlier, it is possible to argue that a portion of research is related to teaching, but it cannot be maintained that all of this effort is so linked.

2. We assume that there should be a stronger correlation between teaching costs and total educational cost. This is not the case at present; the basic income unit is not directly associated with, nor does it reflect present instructional efforts (class sizes, teaching loads, etc.). As we have observed already, these costs cannot be wholly attributed to direct educational services; in fact, they are partly due to scientific and scholarly research that the educational institution carries as its "overhead".

As the analyses in the appendices show,[4] it is possible to identify university research costs and to separate them from direct instructional costs. It is also shown how unit costs in the colleges of applied arts and technology might be expected to decrease in the future as their scale of operation increases and larger class sizes make possible a reduction of overhead costs per student. These are not precise exercises, nor is precision necessary; because of the technical problems involved, a detailed cost accounting is likely to be counter-productive in terms of both its financial and educational consequences. But even with some imprecision, it is clear that we can separate, and thus fund separately, most of the instructional and other activities, including research, of our post-secondary educational institutions.

3. We have assumed that the instructional costs of our post-secondary institutions can be divided into perhaps as few as four basic categories; this would make it possible to devise a formula for the support of these educational services on the basis of four levels (with corresponding weights).[5] This simplification of the present system of weighting is made possible by the separation of instructional costs from other costs which, in turn, follows from the Commission's basic assumptions and arguments concerning research and teaching in post-secondary education.

Intended for illustrative purposes only, the tables in this chapter show that it is possible to build our future financial arrangements on new foundations. While we realize that final figures and detailed schemes would have to evolve through an interaction of the governmental agencies, educational institutions and other parties involved, we are satisfied that our proposals are basically realistic and workable.

4. Given the separation of instructional costs, we may next address the question of how those costs should be shared between the individual student and the public. The possibilities here are limited by prudence and common sense. Obviously it would be undesirable as well as impractical to contemplate any shift that would lead to immediate and drastic changes. A realistic approach, therefore, must assume the continuation of a considerable public subsidy. Following a series of "test-runs" of various schemes and extensive discussions, the Commission has decided to recommend that the public subsidy to institutions should amount to 50 per cent of the operating costs for instruction. This even division has at least two advantages: it makes clear to the student that for each dollar he pays toward his education, the public also contributes one dollar; and it leaves the current level of fees for many students relatively undisturbed (students in general arts and science are found to be paying most of their share of instructional costs already), while bringing an increasing element of justice and rationality to the rest.

5. We have assumed that the funding of research will not be immediately affected, but that the allocation of these funds will be based in the future largely on the overall research performance of the institutions. The idea that governments should finance and account separately for education and research is not new. It was advocated by Joseph Ben-David in 1968 in a paper presented

3 The basic income unit, or BIU, in the Ontario University Operating Grants Formula, is the assumed average cost per student in undergraduate general arts and science programs. Multiples of this unit are used to determine grants per student in other programs. See ***Report of Minister of University Affairs of Ontario, 1967***, 98-105.

4 ***See*** Appendix E.

5 Table IV-4 sets out the appropriate categories.

to the Organization for Economic Co-operation and Development:

> Governments should decide separately on the total budgets to be spent on (1) higher education and (2) fundamental research. The budget for higher education should be allocated to all the recognized institutions on the basis of the numbers of students, weighted accordingly to fields and levels of studies. . . . Part of the research funds should be allocated to the institutions on the basis of the overall attainments of their staffs in research. Different fields could be given different weights. The measurement of the attainments would present a serious problem, but it could be done. . . . The other part of the total budget for fundamental research should go to individuals or groups of researchers as grants for specific projects.[6]

Considering the nature of research and the need for planning, the Commission also assumed that these funds would have to be awarded on a stable, fairly long-term basis.

6. Increased accessibility has been assumed to imply, mainly but not exclusively, the provision of increased post-secondary educational opportunities for students from lower-income groups, for adult students, and for part-time students. We have also assumed that opportunity for students from lower-income groups can be increased only if public financial support embraces both the provision of educational services and individual maintenance. Consequently, for those who do fall within this category, the Commission's recommended grants scheme covers both fees and maintenance. A scheme of these sliding grants has been attached to our Recommendation 64. We believe that students from families in the lowest quartile of income distribution should be eligible for the total allowable grant, with a decreasing proportion of allowable grants going to students from the second lowest quartile. These grants should cover the first three years of post-secondary education, or the equivalent in part-time studies. It would seem reasonable to expect all students to be able to secure financing of any subsequent professional training through the proposed loan scheme or through work-study or other general programs. (*See* Recommendation 67.)

7. The loan scheme that complements the grants is designed to facilitate accessibility to post-secondary education for students from the upper two quartiles. It is certainly not to be expected that many of our middle-class citizens could afford to send their young people to our colleges and universities unless given the opportunity to borrow. At the same time, such a scheme would also help all students who wish to pursue professional or higher degrees and education. A noteworthy feature of our proposed scheme is a provision that students should not be penalized for eventual inability to repay their loans. If, within 15 years after graduation, the student has not earned sufficient income to repay his or her loan, it should be forgiven. Another

Table IV-4

Proposed Fees and Grants per Student for Education Services, Ontario Universities and Colleges (for two semesters; at 1970-71 cost level)

	Enrolment category	Total educational cost per student $	Proposed basic grant $	Proposed fee $
1.	**Universities:** General Arts and Science **Colleges of Applied Arts and Technology:** Applied Arts and Business	1,250	625	625
2.	**Universities:** Honours Arts, Commerce, Law, etc. **Colleges of Applied Arts and Technology:** Technology	1,500	750	750
3.	**Universities:** Engineering, Architecture, etc. **Colleges of Applied Arts and Technology** Applied Health	2,200	1,100	1,100
4.	**Universities:** Medicine, Dentistry, Post-Graduate Study	3,000	1,500	1,500

6 *Fundamental Research and the Universities* Organization for Economic Co-operation and Development,(Paris, 1968), 78.

important feature—and in this we differ from most student-loan proposals—is the equal treatment of women. They would be eligible both for loans and repayments under the same terms as men. If, as a result of marriage, a woman could not repay the loan, it should not be shifted to her husband.

8. We are also assuming that "accessibility" applies not only to established institutions of post-secondary education but to all forms of educational and/or cultural activity that can reasonably fall within such definition. To facilitate this, we are proposing (***see*** Recommendation 68) to grant all citizens who did not receive any post-secondary education the right to claim, either individually or on a group basis, a comparable sum now allotted for public subsidization of approved educational and/or cultural activities. The Co-ordinating Board for the Open Sector, which would be concerned with the University of Ontario, libraries, museums, and other cultural institutions, should be in the best position to determine the viability as well as the educational and cultural values of the proposed program.

Our proposed reforms would bring two other possible advantages in their wake. One is the possibility of providing a more orderly and open system of funding for research and development in special areas. In medicine, for example, we should now be able to support research and development on the basis of our appreciation of improvements in the delivery in health care, rather than to fund such efforts under the guise of "medical education". Accordingly, such funding should be transferred from education to health budgets. Secondly, the scheme should provide a real and convenient opening for discussions between the federal and provincial governments about alternative patterns of "direct" and "indirect" involvement in research. As is well known, the federal interest in research often conflicts with provincial jurisdiction over education. Our proposal should make the resolution of this issue easier. This proposed pattern of research funding should also lead to a full-cost approach to research—that is, one in which all salary and overhead costs would be included. This accommodation of the federal interest, however, should not be allowed to obliterate the provincial responsibility for research. Much pure research as well as teaching-related research is properly linked to education and should continue to be supported as such by the Province.

According to the Commission's estimations, there is not likely to be a great discontinuity in the magnitude of public support of our post-secondary education.[7] However, the component parts may not grow at the same rate as they did in the past. We see this as advantageous both to the public and to the institutions; for, while in the immediate future there may be a stress on accommodating our growing student population, by 1980 we may well see emphasis on other services—a possibility that would be more difficult to realize if we kept our educational and research efforts tied to the same indicators. Secondly, we assume and recommend that institutional grants, though based on different calculations, continue to be allocated in one lump sum. Each institution should be allowed to determine the best way of utilizing its resources. Hopefully, lay and student representation on decision-making bodies within institutions, and public access to data generally, will assist in assuring proper utilization of both educational and research support.

By recommending these reforms, the Commission implicitly rejected two other possible courses of action. One would have been in the direction of seemingly "free" post-secondary education; the other would have restricted access to post-secondary education and, in the name of "quality", cut costs. The first direction would have led us in fact to make post-secondary education a mere extension of our secondary schools—that is, to make the first three or more years "free" (without fees). This alternative has much appeal: many argue, perhaps too cynically, that this is the historical trend anyway; that, less cynically, if we wish to equalize opportunity we should employ the taxation system; and that "free" education is necessary for psychological reasons to attract children from lower-income classes. The Commission cannot accept the belief that we are helpless victims of linear projections of history. Surely, if we think a social trend undesirable we should be able to change it or, at least, to modify it. We also find faith in taxation as the sole instrument of social justice excessively simplistic. Without entering into arguments over equity in our taxation system or denying its importance, it is fair to suggest that taxation is only one instrument of social policy and, despite its complexities, a fairly blunt one at that. It is for this reason that many other, more delicate instruments have been devised to deal with the more complex social issues. Indeed, it is this very consideration that also throws doubt on the

7 ***See*** Appendices D and E.

validity of the argument that "fear of loans" necessarily argues "free" tuition fees. It may, of course, be true that fear of loans might prevent some parents in lower- and middle-income groups from borrowing. However, the depth and spread of credit among all classes of population would either belie this observation or simply indicate that people with lower incomes do not value education to the same extent as other consumer or investment goods. But, if that is true, the problem of attracting students from poor families into post-secondary education will have to be attacked through other social policies and through educational efforts aimed at students at an earlier stage of their schooling. The resources devoted to assisting students in elementary and secondary schools, so that they may be induced to continue their education, are certain to be more productive than any comparable amounts spent on post-secondary education.

The other possible direction, which the Commission also refused to take, would have been to urge sharply restricted enrolment, especially for our universities. Again, the arguments here appear convincing at first; by restricting enrolment we would be keeping quality high and costs low. Behind the argument for keeping up quality, of course, lie some very shaky assumptions about "the pool of ability" and its distribution within our population; about the reliability of our educational system to verify these abilities through its examination system; and about the general desirability of using our post-secondary educational institutions as a screening mechanism for such "ability". (We deal with some of these aspects in Chapter III). Similarly, the notion that cost would be kept down is based on a very limited view of "costs". It is certainly not likely that unit cost would be kept down. More important, if decreased access would lead to increased rewards for graduates (not an unlikely prospect), then the demand for access would make post-secondary education even more politically sensitive than it is at present. Finally, limited access to one type of post-secondary education, especially one that confers higher rewards, would certainly lead to an increased social division among our post-secondary educational institutions and their graduates. This is a prospect which the Commission cannot but reject.

Put very simply, then, the Commission refused either to see the promise of the future in a return to the "elitist" past or to seek salvation in the indiscriminate use of public subsidies.

One other general consideration should be made here. Accessibility to post-secondary education is important because we believe in providing equal opportunity to our citizens of all social classes. Obviously, therefore, any social policy aimed at providing opportunities to lower-income groups must include an element of extra subsidy. However, what is often forgotten is that the exploitation of such an opportunity provided by the extra subsidies must also imply an element of extra effort on the part of the recipient. There does not seem to be any way to achieve social mobility (or whatever else the individual wishes to achieve through equal educational opportunity) except through the combination of public help and individual effort.

Recommendation 61

The public subsidy for institutional operating costs of post-secondary education should be divided into two categories:

a. the subsidy for educational or instructional expenditures, calculated in a manner indicated in the introduction to this section, and amounting to 50 per cent of such costs;

b. payment for research and other activities, on a long-term basis (no fewer than five but no more than 10 years).

The public subsidy should be allocated to each institution in one lump sum, with the first component part based on objective criteria.

Recommendation 62

Institutions should be free to set their own tuition fees.

While the governmental agencies responsible will assume uniform costs and fees throughout the province, institutions should be allowed to increase or decrease their fees. The co-ordinating board would, of course, seek justification for any large departure from provincial norms. The Commission does not anticipate any drastic departures from such established norms.

Recommendation 63

All existing schemes of aid, bursaries, loans, and grants

for post-secondary students should be discontinued in favour of the Commission's recommendations in this area.

Recommendation 64

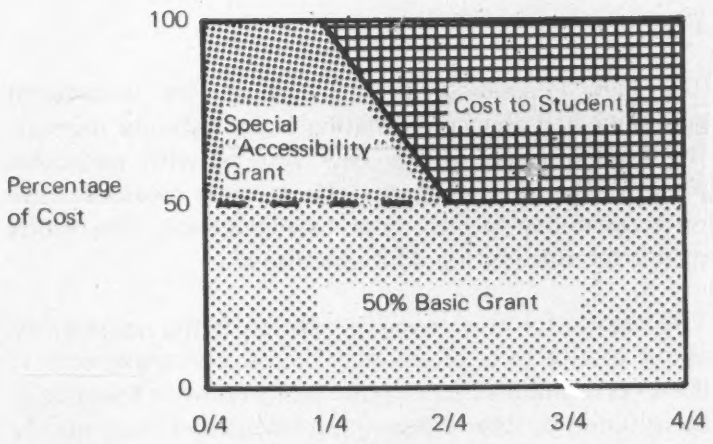
Public financing of students attending post-secondary institutions should be accomplished through two schemes: a grant scheme designed to provide increased accessibility to post-secondary education for students from lower-income groups, and a loan scheme to facilitate attendance at post-secondary educational institutions for the rest of the population as well as those who wish to pursue longer courses leading to professional careers.

The **grant** scheme should have the following features:

a. awards large enough to pay the student's tuition fees and to provide for his maintenance while at school;

b. grants extended to any eligible individual for three years or, if taken on part-time basis, for the part-time equivalent of three years' full-time study;

Figure IV – 1



In 1970, in Ontario, the median family income was approximately $10,000. per annum and the boundary of the lowest quartile was $7,500;

c. eligibility based on considerations of both individual and parental income and wealth and limited to members of families falling below the mean of provincial income distribution;

d. eligibility not limited because the recipient lives with his parents;

e. the amount available scaled according to the recipients' parents' income group;

f. in particular, the amount should be determined on the basis of a sliding scale, gradually decreasing from the maximum amount available to those whose families are in the lowest quartile of income distribution in Ontario, those whose families have incomes at or above the mean for Ontario should not be eligible for grants. (*See* chart and footnote.)

g. the inclusion of parental income in the above calculations should be discontinued if the applicant has lived away from home for more than three years and, during the same period, did not attend any post-secondary educational institution.

The **loan** system should have the following features:

a. open to all students;

b. not limited in time;

c. interest-bearing;

d. repayment based on the "ability-to-pay" principle and fixed as a percentage of taxable income in any year;

e. repayable within 15 years or forgivable thereafter;

f. the yearly amount of support for which individual students could be eligible should be recommended by the respective co-ordinating boards responsible for universities and colleges and the Open Sector.

We are recommending a three-year limit on the grant scheme because general post-secondary education and/or vocational training can be accomplished largely within this period. We also recognize that it is in this period that public and private benefits are hardest to dif-

ferentiate. Advanced professional training, be it in a professional school or in the graduate faculties, is probably more to the advantage of the individual. Society, of course, still provides subsidies even at this level (recognizing the mixed character of this segment as well), but at a reduced rate. Consequently, following the three-year period, support for all students should be sought through loans or through an exchange of support for social services. (***See*** Recommendation 67.)

We are also aware that we are favouring those who live at home. As we have argued elsewhere, however, it is our impression that one factor preventing young people from lower-income groups from attending post-secondary educational institutions is the fear of foregoing earnings. It seemed only reasonable, therefore, to compensate for this factor with additional incentives.

It is also worthwhile to emphasize that the Commission is recommending a sliding scale for these grants, with students from families within the lowest quartile of income distribution supported to the full cost of tuition fees plus approved maintenance costs. A sliding scale of these benefits will make individuals and families earning more than the median of Ontario's income distribution ineligible.

One implication of the grant scheme, together with our call for increased accessibility, is the opportunity presented to our senior or retired citizens to participate in post-secondary education.

Finally, we must acknowledge the obvious administrative difficulties in designating the appropriate categories of income. Families with different numbers of children will have to be treated somewhat differently. However, the Commission does not believe that such administrative and technical problems should stand in the way of the program; they are certainly not insurmountable.

Implicit in our recommendation on loans is the abolition of all existing special treatment subsidies, grants, and loans (Recommendation 63). All students in all post-secondary educational institutions, including those in nursing and teacher training, should be eligible for the new loan scheme. The loans have to be interest-bearing: experience demonstrates that interest-free loans can easily be abused and exploited by unscrupulous people to play the stock market and engage in other profit-yielding enterprises. To protect those who, for one reason or another, would not have the ability to repay the loan, the contingency provision is necessary.

The only major argument against the use of the contingency repayment scheme has been the prospect of having too many women default on the loans, due to marriage. The Commission weighed this drawback but decided that two considerations more than balance it. As our recommendations on the role of women in post-secondary education make clear, we think there has been considerable discrimination against them. We do not agree that the debt incurred by a single woman should be transferred to her future husband. Secondly, and perhaps more important, the Commission anticipates that the role of women in our society will change. While the precise nature of this change is in doubt, it seems very likely that it will be in the direction of more active and prolonged participation in social and economic life.

Of course, we assume that the loans will not be unlimited. They should be calculated on the basis of cost of tuition, maintenance, and other approved expenses. At the same time, they should be open to all students without regard to parental income; if they were not, those in the middle-income group simply could not afford to educate their children. While it is only fair to ask this class of our citizens to accept a larger share of the cost, we cannot realistically expect them to assume this burden without access to loans.

Recommendation 65

The new financing scheme should be introduced gradually and the co-ordinating boards should monitor the consequences of the new system, with particular attention being paid to the effects these measures have on accessibility to post-secondary education. The results of this monitoring should be published.

The reason for this recommendation is the uncertainty about total effects of any new financial arrangements. It is also possible that other policies, not now in force, may be initiated by the federal government and thus modify presently anticipated consequences. Finally, and most important, the Commission throughout its deliberations was often struck by the lack of conclusive data on which to base judgements about the social consequences of many of our social policies. While policies are often

initiated for social reasons, there are seldom any measures or indicators by which to judge the results of these policies.[8]

Recommendation 66

The above new grant scheme should also be open to people who have been absent from elementary or high school for more than three years and who wish to continue their education at the post-secondary educational level. Any make-up work necessary for admission to a post-secondary educational institution should be provided free to these people.

There are a number of reasons for this recommendation. As we have stated throughout this report, we are concerned with providing increased accessibility to post-secondary education for people who have not gone directly on to post-secondary education after leaving high school. These people should be given additional opportunity to re-enter the educational scheme. Recommendation 66 also reflects the Commission's desire to provide incentives for breaking up the sequential nature of schooling and encourage continuing education on a part-time basis.

As in other recommendations, we define as eligible not only those who wish to re-enter post-secondary education on a full-time basis but also all those who desire to proceed through part-time attendance. In such cases, of course, eligibility for grants under Recommendation 66 should be counted in fractional terms and thus spread over a longer period of time.

Recommendation 67

The Governments of Canada and of Ontario should establish programs in which the students would be excused from payments of their share of costs in return for a contract of service, negotiated and/or approved by the responsible governments.

8 Fifth Annual Review Economic Council of Canada, Sept. 1968, p. 134. In a discussion of social policies it is noted that "Apart from a few illustrious exceptions remarkably little has been done by way of systematic evaluation of these policies in operation either separately or in combination."

See also "Social Reporting and Educational Planning: A Feasibility Study", prepared for the Commission on Post-Secondary Education in Ontario.

Recommendation 67 seeks to provide some special access to professional schools for students from less privileged homes. At the same time, society will benefit by enjoying the services of qualified professionals in places and spheres of activity where the present system of allocation of services fails to provide them. The proposal may appear to discriminate against students from poor homes and, to a certain extent, it does. However, in professions with a scarcity of admission places, we have recommended that the selection should be done by lottery, thus increasing the social mix. Also, there simply is no way to break socio-economic disadvantages without individual effort. Finally, the Commission thinks the social and financial rewards that will be forthcoming to those who take this route would tend to compensate for the initial apparent discrimination.

Recommendation 68

All Canadian citizens resident in Ontario who have not received or who choose not to seek any formal post-secondary education, should be eligible to apply for a grant amounting to an approximate value of the average public subsidy for conventional post-secondary education. This grant could be obtained either for educational or cultural activities, to purchase educational or cultural services by an individual citizen or by a group of citizens. The Co-ordinating Board for the Open Sector should be responsible for the administration of this type of grant. The Government of Ontario should allocate $15,000,000 for this purpose to the Co-ordinating Board. The Senior Advisory Committee should review this program annually.

The aim here is to help those who did not receive any post-secondary education. The recipients of the grants should be free to spend the funds either at a traditional institution of post-secondary education or at any other approved educational or cultural institution. This should allow those who may not find an appropriate program offered by a traditional institution to seek the satisfaction of their need in a new way.

Should this program be successful, the Commission trusts that the responsible agencies would urge the government to expand it.

Recommendation 69

There should be established a limited program of premium scholarships for advanced study, tenable in all fields, for which selection would be through a province-wide competition, with provision made for a proportion (say 15 per cent) of non-Canadians. The awards should carry stipends of approximately $4,000 per annum, plus tuition.

As the general recommendations in this section make clear, it is the Commission's view that graduate studies should not generally be treated specially, as has been the case in the past. On the other hand, the continuing availability of premium scholarships in other jurisdictions obliges Ontario to offer like awards in order that we do not lose an intolerable proportion of our most academically gifted people. The proposed program should be designed in detail to complement such scholarship programs as those of the Canada Council and National Research Council.

Recommendation 70

Colleges of applied arts and technology and similar institutions should be treated on the same basis as universities with respect to the provision of capital funds, especially such funds as are to be used for cultural, athletic, and semi-social purposes.

This recommendation is an outgrowth of the Commission's concern to provide "parity of esteem" for all institutions of post-secondary education in Ontario. There seems to be no reason whatsoever to justify different standards of facilities used for students' activities in the various types of post-secondary institutions. When this occurs, an unnecessary social odium is attached to such differences, which often lead to the attribution of "inferior" status.

At the same time, as we have provided for in other recommendations, facilities of this type in all post-secondary educational institutions should be planned on the basis of co-operation and pooling of resources. Moreover, wherever practicable, they ought to be open to the community as a whole.

Recommendation 71

The provincial co-ordinating boards for universities and for colleges should move, whenever possible, towards a unified formula system that would encompass both operating and capital grants.

The proper balance of resource allocation between capital and operating expenditures is one of the more difficult tasks of planning and budgeting. It is now generally conceded that better utilization of both types of resources can be best achieved if local units are given the right and responsibility to decide for themselves whether to put up additional buildings, renovate old buildings, rent space, or trade off capital expenditures for operating improvements. Such decisions may become even more crucial if we begin to experience a decline of the post-secondary population—as has already begun to happen at the elementary school level.

Recommendation 72

Grants and subsidy policies by the government should be made and announced on a rolling three-year basis to facilitate long-term planning.

Briefs Submitted to the Commission

APPENDIX A

Introduction

The Commission on Post-Secondary Education in Ontario was specifically required by its terms of reference "to provide full opportunity for all interested individuals and organizations to express opinions and offer discussion on both broad and specific issues related to the development of post-secondary education in Ontario."

Canadian experience suggests that commissions of enquiry, apart from their utility in making policy recommendations, may also serve the additional and valuable functions of identifying diverse opinions, as well as focussing public opinion on matters of broad social concern. We regard the performance of these latter functions as having been a significant part of this Commission's work. Furthermore, we believe that the publication of our ***Post-Secondary Education in Ontario: A Statement of Issues*** may have helped to spark discussion of educational issues and prompted more widespread production of briefs than might otherwise have been the case.

We are indebted to many groups and individuals who prepared careful and thoughtful briefs. These presentations were stimulating and useful; they provided information and opinions which were of real benefit to the Commission in its deliberations. Through the briefs and the hearings we found that our perceptions of the problems of higher education in Ontario, as reflected in the ***Statement of Issues,*** were also matters of widespread public concern; many were issues to which interested citizens and groups had already devoted considerable attention.

Our process of interaction with the community was carried on through innumerable informal meetings as well as formal consultations, through monitoring of media responses to our processes, through various aspects of our research program, as well as through the lengthy process of considering briefs submitted and discussing them at public hearings.

The Commission held a total of 25 public hearings in 20 Ontario cities and towns during 1970 and 1971, as listed in Appendix B. We received 334 briefs (also listed) from across the province, some long and detailed, some short and pithy, but all reflecting the growing public interest

in the present and future problems of post-secondary education in Ontario. All the briefs are on file in the Commission offices, and copies of all have been deposited in the Department of Public Records and Archives, where they are open to public scrutiny and may be consulted or copied. Verbatim transcripts of discussions at hearings were not made, but written abstracts of hearings were kept and are also on file as part of the Commission's public record.

Summary of Recommendations Contained in Briefs Submitted to the Commission

Briefs were received from a wide cross-section of organizations, professional associations, educators, students, and interested citizens. Some of these briefs reflected concern with specific local problems, while others addressed themselves to more general problems mentioned in the ***Statement of Issues,*** focussing their comments on such major questions as the certification process, rising costs, duplication of facilities, curricula and teacher training.

A large number of submissions expressed concern with the total philosophy of post-secondary education. Over 70 per cent of the briefs requested that priority be given to an assessment of what the present opportunities really are, what alternatives exist, who benefits most from post-secondary education, and why so many students (and teachers, and administrators, and taxpayers!) are dissatisfied with a system so long regarded as self-justifying. The desire to reassess the long-term goals of post-secondary education was common to many of the briefs, although they differed in stating exactly what the philosophy of higher education should be. The briefs reflected an apparently widespread feeling that the present system is good in many respects, but could be vastly improved.

The following synopsis is intended to summarize the main thrust of the ideas and opinions presented to us, and to indicate the subjects of most widespread interest and concern. This synopsis cannot, of course, include every recommendation or argument offered in the briefs, but it attempts to show that certain issues appear to be of major importance to different groups and interests in Ontario. These topics—the objectives of higher education, equality of opportunity, financing and costs of post-secondary education, continuing education, community participation, and creation of alternatives—are repeated often enough to indicate where chief concern rests. Almost every brief, however, takes a different approach in its proposed solution to these problems, and so we can offer only limited generalizations on recurring themes.

Aims and Objectives of Higher Education

Opinion about the objectives and philosophy of higher education was divided into two groups: those who felt that education should prepare people for employment and specialization, and those who were convinced that higher education should be uncoupled from the job-certification process and should not result in narrow specialization.

The division did not appear to reflect different sectors of the community. Briefs from educators, students, businessmen and individuals supported each viewpoint. Discussion about the objectives of post-secondary education also included comments on universities and colleges and their respective "roles".

As jobs appear and disappear in a dynamic society, the task of predicting demand for specific occupations grows more, not less, difficult. Only a change in emphasis from mastery of a massive content to mastery of approach and disciplined understanding of problems will result in the development of a truly flexible person prepared not just for a role in a static society, but capable of changing and adjusting to change. This view was espoused by professional educators, including both administrators and teachers from all levels, as well as representatives of several large industrial concerns.

Several submissions representing corporate interests emphasized the view that "training" is a relatively simple process which can be learned on the job, but "education" is an ongoing process where emphasis should be on learning how to learn, to analyze and criticize, to understand and communicate with people, and to apply logical techniques to abstract problems. This process can take place in depth at the level of higher education, and is not always specifically job-oriented. This view was supported by several large professional associations, and by many educators and private citizens.

The other side of this issue gained support from such employers as Steep Rock Iron Mines and groups such as

the Canadian Manufacturers' Association, who find job applicants have years of education but "don't know how to do anything". Many of the briefs from students, who have discovered that they have no marketable skills even after years of post-secondary education, also demanded more "relevant" training for definite jobs. The view that students should be more adequately prepared to earn a living was supported by some of the briefs representing individuals, and by an overwhelming number of educators in both universities and community colleges, including the Ontario Confederation of University Faculty Associations.

The briefs favouring the practical approach to education often commented that education for its own sake—culture and self-fulfilment—can be included as part of the continuing education concept.

Those who advanced the training concept of higher education favoured specialization, and generally sought immediate solutions to the problem of unemployed graduates. Those who favoured generalization and an inter-disciplinary approach to problem-solving urged the Commission not to seek immediate, short-term, popular solutions which might preclude the careful analysis of social and personal benefits derived from (often) non-practical courses.

Although opinion was divided on the issue of what higher education should really be, the briefs were unanimous in urging the Commission to recommend the establishment of means whereby students, teachers, and members of the community could participate in the decision-making, planning, and administrative processes of post-secondary institutions.

All who discussed the issue of community involvement (over 50 briefs) agreed that, in the future, universities and colleges should be more involved in the community and vice versa. This should include a commitment by universities and colleges to engage actively in community-oriented projects: increased co-operative work/study programs, volunteer programs either community- or university-sponsored, use of community facilities by students and of institutional resources by members of the community, day-care facilities and continuing education programs.

Most people, while expressing the hope that the "status" value of holding a degree or diploma will continue to decline, believe that our system should not be exclusive and that varying methods and institutions should exist so that all citizens may participate in some form of post-secondary education, whether or not for the recognition implied by a degree or diploma.

A number of alternatives to our present system were suggested in the briefs. There was considerable support from all sectors for the idea that students spend a year or more after secondary school in volunteer activities such as Canadian University Service Overseas, Company of Young Canadians, or an expanded Opportunities for Youth program; working; travelling; engaging in self-instruction or junior apprenticeships. Several suggested that support be given to industry to hire young people, and that support be increased for government programs already in existence which provide some alternative to the "stay-in-school" syndrome. Some professional educators and especially faculty members were in favour of a system of viable alternatives to entering post-secondary institutions immediately after high school graduation; they suggested that students with work experience would possess clearer ideas about themselves and their goals when they finally entered the institutions. They also felt this would decrease the social pressures in certain groups to "get a degree".

In a system which envisages ease of accessibility for all, the problem of transfer between courses and between institutions is one which provokes much discussion. Considerable agreement has been reached about the principle of increased flexibility in transferring, if not the exact means of achieving it.

Credits should be "portable" or at least evaluated on an individual basis, and students should not be unnecessarily penalized by needless repetition upon changing schools or courses. Decisions about admittance or acceptance of credits gained outside the institution should be on the basis of individual merit.

Several briefs from students suggested that if a person could indicate competence, however gained, to an acceptable standard in a course, he should be granted academic credit. This idea gained support from several faculty members and university administrators, including the Ontario Committee of University Presidents.

Decisions about priorities and goals in post-secondary education inevitably are based on certain assumptions

about parts played by the various participating institutions. The greatest support demonstrated in the briefs was for the concept of a college of applied arts and technology as a non-exclusive institution oriented to vocational and skill training. Of the 15 briefs which stated this view, all were from individuals or groups connected with educational institutions in some way: seven were from sources representing the colleges and four, including the brief from the Ontario Confederation of University Faculty Associations, were from sources connected with universities. Perhaps surprisingly, no definite support for a "training" concept of the colleges' role was forthcoming from briefs representing industry, except for Steep Rock Iron Mines, whose submission encourages further integration of education with vocation.

The briefs which specifically stated that skill training in colleges of applied arts and technology should not be given to the exclusion of the "total development of the individual" were also from either teachers, administrators, or students at colleges and universities.

The Ontario Confederation of University Faculty Associations and the Committee of Presidents of Universities of Ontario, as well as individual professors, teachers and institutional administrators, perceived the universities as providing emphasis on individual research, theoretical and professional education and graduate work. This belief, stated explicitly in six briefs, was implicit in a great many others representing all sectors of the community.

University entrance standards should be kept high to maintain or raise the quality of education. This was stated emphatically in two briefs representing post-secondary teachers, and by various community groups such as boards of education and the University Women's Club. The point appears to contradict the more widely held view that admission should be available to as wide a segment of the population as possible, regardless of age or previous education. The latter idea was supported in 15 briefs from students, professors at universities and colleges, disadvantaged groups (women, Indians), associations (a labour council and a professional bankers' group), the Ontario Institute for Studies in Education, a board of education, and colleges of education and nursing. Concern that quality of university education be maintained, in some manner consistent with increased ease of admission and accessibility, was expressed chiefly in submissions from people involved in education—teachers and administrators.

The university and the college each furnish a different type of education, and it seems fair to summarize the thinking reflected in many briefs to the Commission by stating that the difference in emphasis is considered to be desirable; there should be highly differentiated types of institutions to choose from as long as credit is given for achievement, however attained, and students can move back and forth between levels and types of institutional education without getting "boxed in".

Universality of Educational Opportunity

Whether education is viewed as consumption or investment, whether the returns are seen as primarily private or as both private and social, a system unencumbered by economic, social, or other barriers is indispensable to the effectiveness of our complex society. The consensus in the many briefs (over 40) addressing this issue was that we have not yet achieved equality of opportunity, nor have we approached the problem where it starts—in the elementary and secondary grades, and in the existing economic and social systems. Equality of opportunity still does not exist for some groups: Indians, mature and part-time students, Francophones, women, geographically isolated and culturally deprived students.

The single most common request in the briefs representing Francophone Ontarians was for French-language instruction at the post-secondary level in areas where the French-speaking population is large enough to warrant it. Students who have achieved secondary-school graduation in French should not have to switch to English to pursue higher education, it was argued, nor should they have to pass examinations for trade certification in their second language.

The briefs requesting increased opportunity for Indian students suggested a new system of education as the long-range solution, and special allowances for the shortcomings of early education as a short-term solution at the post-secondary level. Two briefs suggested establishing a post-secondary institution devoted to the special higher education needs of Indian students.

Several briefs urged that attention be given to expanded educational opportunities for women. The history of sex

bias in admissions policies to professional schools was pointed out, as was the need for more enlightened guidance and counselling in secondary schools.

Several briefs focussed on the geographic maldistribution of higher educational services, calling attention to the special (often financial) problems of students in rural and northern areas in gaining access to educational opportunities.

The greatest general issue of public concern appears to be the problem of socio-economic equality: 39 briefs recommended a more thorough-going and effective equality of opportunity, and an assault on the barriers to such opportunity.

The briefs offered a variety of suggestions to assist in achieving the goal of true equality. Several private citizens suggested that an Educational Opportunity Bank would assist in removing at least the financial barriers. Others, notably educators, expressed the opinion that such a solution would have the effect of further discriminating against the poor, since they would be the ones obliged to graduate with large debts to pay off, and since many individuals would be extremely reluctant to enter post-secondary institutions at all if it meant going heavily into debt.

Other proposed solutions included the use of the Illich educational credit card, where everyone would have the opportunity to use the stipulated number of years at his own discretion, and any years in excess of that amount would be paid for by the student and the state in proportions varying according to who was more likely to benefit from the extra years of study.

Greater use of "culture-free" tests at early levels of education, better guidance, and more counselling were suggested as interim measures in assuring everyone a more equal opportunity.

Within the context of universality of accessibility, there was some support for the idea of an "open" university, extended to all by radio and television, with credit or non-credit courses offered. This suggestion did not appear to be enthusiastically accepted by most of the educators represented in the briefs, although it was endorsed by the board of governors of one college and by the chief librarian at McMaster University.

Equality and universality mean to many that a "highly pluralistic or differentiated post-secondary system exists in which many needs and levels of ability can be served." It is recognized that human beings are not equal in capacity to learn, and therefore a system which strives to eliminate injustice and discrimination at the early levels of education can be more certain of fair opportunities for all at the appropriate type of institution when the post-secondary level is reached.

Financing and Costs of Post-Secondary Education

Very little real agreement was evidenced in the briefs with regard to the cost and funding of institutions or the appropriate cost to the student. A great number of submissions dealt superficially with this subject, stating only that costs must be curtailed, better management applied to existing resources, and unnecessary duplication and unprofitable courses eliminated. This is an area of general concern, as shown by the fact that 80 briefs had suggestions about some aspects of financing.

The main point of contention seemed to be whether the cost of education should be borne by the public or private sector. A number of briefs (11) from private citizens, post-secondary teachers and groups such as Rotary and Alumni Associations indicated that rising cost should be absorbed by the "consumers". Several individual professors as well as the Ontario Confederation of University Faculty Associations suggested that the increase in costs to the student be coupled with a scheme of augmented loan and scholarship programs, or adoption of the Educational Opportunity Bank.

The briefs supporting the concept of education as a continuum in which all citizens participate at some time stated that fees should ***not*** be increased, that this is definitely an area for extensive public support; they expressed the hope that the fee portion or private cost will decline. They would offset any rise in costs by more effective use of all existing resources, facilities, and personnel, utilizing innovative instructional techniques and curtailing the building of new physical facilities.

Submissions which favoured a high degree of public support included representation from private citizens and professional educators. Approval of public support was implied in many other briefs which urged better

allocation and management of funds. Six presentations recommended full public support to the extent of free tuition at the post-secondary level: they represented the Ontario Federation of Labour and other labour groups, students, and political groups (Young Socialists, Communist Party of Canada). Three other briefs (from university and college of applied arts and technology professors and a Conservative Party planning committee) recommended free tuition if a rigorous entrance examination for colleges and universities were instituted.

Among possible alternatives for ensuring minimum financial equality were suggestions (from CUPO and professors, as well as private citizens) that every person receive a number of "entitlements", or an educational "credit card" to be used for the education of his choice. If the student's choice of studies or courses exceeded the "entitlement", he should be able to borrow the remainder from the public treasury and repay it from subsequent career earnings.

Several submissions from educators requested that graduate studies be financed in a new way, as the present system of counting numbers discriminates against schools which do not have a large and expanding graduate faculty.

Those not in favour of curtailing funds to graduate schools often suggested that more rigorous controls and closer scrutiny of research proposals be instituted, so that money would not be spent on needless research.

Continuing Education

This was the most widely discussed of all topics covered in the briefs; apparently it is seen as a special issue arising out of the general concern for increased equality of opportunity or broader access to higher education. There were 88 briefs which made specific recommendations on this subject, and others which discussed it indirectly. They represented all segments of the community appearing before this Commission: faculty, students, and administrators of educational institutions, business, labour, professional associations and community groups, and private citizens.

With one exception only, all expressed the desire that the educational system be more flexible, available to all who wish to participate, at different times and in different ways throughout their lives, in many types of learning environments. Many briefs suggested that it should be possible to enter, leave, and re-enter the educational stream at intervals convenient to the student, with interruptions as long or as short as the individual needs in order to achieve his own goals.

The connotations of "continuing education" appeared to vary. However, it was commonly agreed that education should be viewed as a life-long process which need not be formally institutionalized in all its stages.

Different kinds of learning take place throughout the life of the individual. The present requirements of technology and future demands of the "post-industrial" age suggest that an increasing number of people will want to both upgrade skills and knowledge for the present, as well as indulge in vocational, cultural and leisure-time education in the near future. Both these types of learning were viewed as legitimate components of "continuing education".

Several briefs from professional associations agreed that although students should continue to pass through a certain amount of formal institutionalized learning, no individual can regard himself as "completely" educated in his field and should have a variety of upgrading and refresher courses available. This belief was sustained by associations representing nurses, physicians, land surveyors, accountants, engineers, etc. as well as teachers and private citizens. Several professional associations, including the Ontario Institute of Chartered Accountants, were not in favour of making refresher courses mandatory, but all requested that these courses be made available. It was generally accepted that "units of experience" should count for credit in a system where credits and recognition still matter.

Some of the briefs representative of both industry and private individuals stated that employees should be reimbursed for expenses incurred in returning to school; some felt the individual should be paid full salary to go back to school. Others suggested adopting the day-release system used in England.

Although some felt that the university should not take a stand on political or moral issues, the prevailing sentiment in the briefs appeared to be concern that the university be "relevant", reflective of the needs of the community it serves, and preferably a leader in areas of

social concern. Shifting the institution's emphasis from the old lockstep to continuing or life-long education, and increasing its role in offering many different kinds of courses in response to demonstrated needs were seen as major ways in which the institution could lead in changing society's traditional view of education as primarily for an elite group.

Briefs from professional educators stated emphatically that they did not interpret this expanded role to mean the perfunctory addition of one or two pottery courses, but rather a complete change in emphasis from a rigid, exclusive system to one where the education is available whenever and however it best suits the individual and the community.

Brief No.	Brief Title	Author, Affiliation and Location
001	Untitled Brief	Bill Barril and Tom Dean, Student Senators, The University of Western Ontario, London.
002	Post-Secondary Education as It Applies to Mature, Special or Part-time Students	H. J. Dost, Thunder Bay
003	On the Role of Confederation College and Lakehead University in Relationship to Post-Secondary Diploma Programs	The Confederation College of Applied Arts and Technology, Thunder Bay
004	A Brief Concerning the University, Society, and Students	Edward B. Champagne, M.D., Montreal, Quebec
005	Untitled Brief	Committee of Presidents of the Colleges of Applied Arts and Technology of Ontario
006	Proposals for the Development of Ryerson Polytechnical Institute	Ryerson Polytechnical Institute, Toronto
007	A Self-Directed Adult Education Program	W. A. Cormack, Port Credit
008	Post-Secondary Education in a Creative Society	George E. Cross, Waterloo
009	Church-Related Institutions of Ontario	Barry F. Brown for the Church-Related Institutions, Toronto
010	Proposing the Creation of a College of General Education (Liberal Arts College) Orillia, Ontario	The Simcoe College Foundation, Orillia
011	The Concept of Continuing Education	Alan M. Thomas, Ph.D., Ottawa
012	Untitled Brief	The Theological Colleges of Ontario, Willowdale
013		Withdrawn
014	Observations	The Educational Television and Radio Association of Canada, Toronto
015	The Five-Year Plan of St. Lawrence College of Applied Arts and Technology	St. Lawrence College of Applied Arts and Technology, Kingston

016	Crossroads—An Educational Philosophy for Community Colleges; Other Channels—A New Educational Technology Based on Learner Centred Methods	Earl Naismith, Belleville
017	Untitled Brief	A Committee of the Faculty of Sheridan College Brampton
018	New Objectives for Universities Essential in a Changing World	Professor Maurice R. Hecht, School of Business, University of Toronto, Toronto
019	Untitled Brief	A Group of Students in Colleges of Applied Arts and Technology
020	Untitled Brief	The Canadian Manufacturers' Association, Ontario Division, Toronto
021	A Shift in Emphasis	F. H. Koch, Kingston
022	International Education	Council of the International Centre, Queen's University, Kingston
023	Graduate Studies and Research at Lakehead University	Various Segments of the Lakehead University Community, Thunder Bay
024	Some Possibilities for Post-Secondary Education	Howard D. Fine
025	Thoughts on Community Colleges	William E. McLeod, Business Division, Cambrian College of Applied Arts and Technology, Sudbury Campus
026	Untitled Brief	The Association of Professional Engineers of the Province of Ontario, Toronto
027	Untitled Brief	Durham College of Applied Arts and Technology, Oshawa
028	Untitled Brief	St. Catharines New Democratic Party Association
029	Untitled Brief	University of Sudbury (In Federation with Laurentian University) Université de Sudbury (Fédérée à l'Université Laurentienne)
030	Untitled Brief	Professional Librarians of Lakehead University and Confederation College, Thunder Bay
031	Untitled Brief	David W. Menear, F.C.C.T., Assistant Professor, Althouse College of Education, University of Western Ontario, London
032	Teachers, Education and The System	N. L. Nicholson, Althouse College of Education, London
033	A Report to the Commission on Post-Secondary Education in Ontario	Miss W. Brown, Mr. B. N. Crosby, Mr. M. H. Swain of The London Life Insurance Company, Head Office, London, Ontario
034	Untitled Brief	London Public Library and Art Museum
035	Untitled Brief	Director of Continuing Education and Student Affairs on Behalf of Cambrian College, Sudbury, Ontario

036	The Nature and Function of a University Faculty of Education	Ernest Stabler, Dean, Althouse College of Education, The University of Western Ontario, London
037	Untitled Brief	A. B. Atkinson, L.C.S.T., F.I.M.L.T., F.R.S.H., Regional School of Medical Laboratory Technology, London, Ontario
038	Untitled Brief	Orville Eadie, M.A., Ph.D., London, Ontario
039	Étude préliminaire sur les variables psycho-socio-économiques des étudiants francophones et anglophones	Albert Cyr, Service de consultation, Sudbury, Ontario
040	The Place of Theology in the University	President of Regis College, Willowdale
041	Everyone Inadequately Educated is Exploited	Wilma B. Bolton, Graduate Student in Political Science, University of Western Ontario, London, Ontario
042	Untitled Brief	David Verdun, Graduate Student in Chemistry, University of Western Ontario, London
043	In Support of the London Adult Basic Education School	Adult Basic Education School, London
044	Some Remarks on Post-Secondary Education in Ontario and Suggestions Toward a Possibly More Efficient System	Dr. René Romain Roth, Department of Zoology, University of Western Ontario, London
045	Untitled Brief	London Council for Adult Education
046	The Home Study Approach to Education	Gary Hutchison, P.Ag., Agricultural Specialist, C. E. McNinch, P.Ag., Acting Director, University of Guelph
047	Interim Report of the Commission on Post-Secondary Education in Ontario: Some Observations	J. F. Hilliker, Assistant Professor, Thunder Bay
048	A Brief Commentary on Education	Gord MacKay, London
049	Valueless, Coercive Indoctrination	William Westmiller, Kingston
050	Untitled Brief	Niagara Regional Library System, St. Catharines
051	A Statement of the Aims of the Lincoln County Board of Education in Relation to the Field of Post-Secondary Education	The Lincoln County Board of Education, St. Catharines
052	Memorandum	Emlyn Davies, President, Huntington University, Sudbury
053	Untitled Brief	Edward F. Sheffield, Professor of Higher Education, Toronto
054	Untitled Brief	Secondary School Teachers of the Sault Ste. Marie Division of the Ontario Secondary Schools Teachers' Federation
055	Untitled Brief	Sault Ste. Marie Board of Education
056	The Library Needs of the Francophone Community of North Bay	Franco-Ontarians of North Bay
057	Algoma College, Sault Ste. Marie	Sault Ste. Marie and District Chamber of Commerce

058	**The Establishment of a University College in the Porcupine Area**	The Committee for the Establishment of a University College in the Porcupine Area, Cochrane
059	**Untitled Brief**	Northern College of Applied Arts and Technology, Timmins
060	**Untitled Brief**	The Principal's Executive Committee of the Sault Ste. Marie Campus of Cambrian College
061	**Untitled Brief**	A. H. Rose, Sault Ste. Marie
062	**Untitled Brief**	Sault Ste. Marie Public Library Board
063	**Independent Learning**	Phyllis D. Hamilton, Co-ordinator, Secretarial Science, Sir Sandford Fleming College, Peterborough
064	**Untitled Brief**	The Nipissing Board of Education, North Bay
065	**Untitled Brief**	The Education Committee of Local Union 2251, United Steel Workers of America, Sault Ste. Marie
066	**Memorandum**	Associate Director of the University of Toronto Press, Toronto
067	**Untitled Brief**	The Board of Governors of Nipissing College, North Bay
068	**Untitled Brief**	K. Rudderham, Chairman, Professional Development Committee, R. Steadman, President, Faculty Association, Cambrian College of Applied Arts and Technology, North Bay
069	**Untitled Brief**	J. B. Swinton, Thunder Bay
070	**Fine Arts and Performing Arts in the Ontario Colleges of Applied Arts and Technology**	G. H. Robertson, B.A. Sc., M.A. Sc., P.Eng., Dean of Faculty, Sir Sandford Fleming College, Peterborough
071	**L'Éducation post-secondaire pour l'élément francophone dans le district de Nipissing**	Solanges Foy, Thérèse Robert, Laura Charron, North Bay
072	**Untitled Brief**	Orillia Public Library Board
073	**The Education of Women**	Group of Individuals, Downsview
074	**Untitled Brief**	Peterborough County Board of Education
075	**Untitled Brief**	John P. Martyn, Head, English Department, St. Peter's High School, Peterborough
076	**Student Responsibility for Learning**	Miss Catherine M. Brown, Barrie
077	**Untitled Brief**	Ronald J. Mackenzie, Supervisor, Georgian Bay Regional Library System, Barrie
078	**Untitled Brief**	Barrie Public Library
079	**Untitled Brief**	Walter Pitman, M.P.P., Peterborough
080	**Untitled Brief**	Peterborough Labour Council
081	**Untitled Brief**	Ontario County Board of Education, Oshawa
082	**Untitled Brief**	The University Women's Club (CFUW), Barrie

083	**Time Restrictions and Graduate Recognition**	Students' Council, Northern College of Applied Arts and Technology
084	**Untitled Brief**	Rotary Club of Timmins, Ontario
085	**Untitled Brief**	D. A. R. Bradshaw, President, Confederation College of Applied Arts and Technology, Thunder Bay
086	**Untitled Brief**	Douglas J. M. Bullied, F.R.I., Realtor and Appraiser, Oshawa
087	**History and Social Sciences in the Academic Upgrading of Adults with Observations on the Retraining of Adults**	A. Bradford, Orillia
088	**Untitled Brief**	Peterborough Progressive Conservative Policy Committee
089	**Untitled Brief**	The Grey County Board of Education, Markdale
090	**Untitled Brief**	The Rotary Club of the City of Barrie
091	**Untitled Brief**	Le Collège de Hearst
092	**Untitled Brief**	Withdrawn
093	**Untitled Brief**	Department of Adult Education, Ontario Institute for Studies in Education, Toronto
094	**A Brief Review of the Present Status of Some Future Prospects for the North Bay College Education Centre**	R. Moynan, Vice-Chairman, Cambrian College Board of Governors; Chairman, Campus Planning Committee, North Bay College Education Centre
095	**Accountability in Post-Secondary Education**	Murray A. Hewgill, Ph.D., Principal, Cambrian College, North Bay Campus
096	**Untitled Brief**	Dr. J. W. Trusler, Chairman, Nipissing College Board of Governors, North Bay
097	**Untitled Brief**	Trustees of the Peterborough County Board of Education
098	**Untitled Brief**	Mrs. Joyce Mackenzie, Housewife, Peterborough
099	**Untitled Brief**	Florence (Mrs. G.) Butt and Irene (Mrs. A.) Ip, Peterborough
100	**Untitled Brief**	Sir Sandford Fleming College Students, Peterborough
101	**Untitled Brief**	Allan Ironside, Past Chairman, Orillia Historical Society
102	**Untitled Brief**	The Institute of Chartered Accountants of Ontario, Toronto
103	**Basic Concepts**	The Ontario Association for Continuing Education, Peterborough
104	**Untitled Brief**	Ontario Library Association, Toronto
105	**Untitled Brief**	Oshawa and District Labour Council
106	**Untitled Brief**	The Council of the Corporation of the Town of Whitby
107	**Untitled Brief**	City of Oshawa
108	**Untitled Brief**	Canadian Book Publishers' Council, Toronto

109	**Untitled Brief**	H. J. Stanford, Ph.D., Trent University. Peterborough
110	**Untitled Brief**	Toronto Public Library Board
111	**Post-Secondary Education: The Privileged and the People**	Hugh R. Innis, Agincourt
112	**Inter-University Cooperation—with Special Reference to the Universities of Ontario**	H. M. Good, Queen's University, Kingston
113	**Untitled Brief**	The Central Ontario Joint Planning Board
114	**The Role of the Medical School in Health Science Education**	The Ontario Council of Deans of Medicine
115	**Untitled Brief**	The Ontario Association of Certified Engineering Technicians and Technologists, Toronto
116	**Untitled Brief**	Arthur Stinson and Alan Clarke, Ottawa
117	**Untitled Brief**	The Department of Philosophy, St. Michael's College, Toronto
118	**Post-Secondary Education in Ontario**	Canadian Institute of Management, National Council, Toronto
119	**Problems in Present-day Canadian Universities**	Ric Careless, Student, University of Victoria, Resident of Ontario
120	**Printing and Publishing for the New Age of Education**	William Ready, M.A., M.L.S., Dip. Ed., University Librarian and Professor of Bibliography, McMaster University, Hamilton, Ontario
121	**Untitled Brief**	A. P. Backler, Oshawa
122	**A Stage for Adult Enquiry**	Discovery Theatre, Toronto
123	**Retirement Education**	Mrs. Jean Good, Toronto
124	**Continuing Education for Bankers at the Post-Secondary Level in the Province of Ontario**	Institute of Canadian Bankers, Montreal
125	**Untitled Brief**	Group of Instructors at The School of Technology, Algonquin College, Ottawa
126	**Untitled Brief**	(Mrs.) M. Schneider, Kindergarten Teacher, Oxbow Park School, Stayner
127	**Proposal for a Centre in Educational Alternatives**	Bruce Rusk, William Tooley, Edward Waitzer, Ontario Institute for Studies in Education, Toronto
128	**Untitled Brief**	The Executive Committee of the Faculty Association, University of Western Ontario, London
129	**Towards Two Thousand: Post-Secondary Education for Post-Industrial Ontario**	Committee of Presidents of Universities of Ontario Comité de présidents d'Universités de l'Ontario
130	**Teacher Education**	J. Bromstein, B.A., M.Sc. Ed., Principal, Pioneer Memorial School, Wentworth County Board of Education
131	**Untitled Brief**	Committee of the Faculty of Georgian College of Applied Arts and Technology, Barrie

132	Untitled Brief	Barrie Art Club
133	Untitled Brief	The Staff of the Owen Sound Collegiate & Vocational Institute
134	Untitled Brief	G. F. Martin, Oakville
135	Outline Approach for Development of Applied Arts Course for Secondary School Students at Stratford Central	D. S. Pryke, Industrial Arts Department, Stratford Central Secondary School
136	Untitled Brief	Richard G. Capling, Kitchener
137	Untitled Brief	James B. Schneider, Hamilton
138	Untitled Brief	The Board of the Lake Erie Regional Library System–1971, London
139	Untitled Brief	Faculty, St. Mary's School of Nursing, Kitchener
140	Untitled Brief	The Canadian Federation of University Women, Windsor Club
141	Untitled Brief	Barrie and District Association for the Mentally Retarded
142	An Alternative to Higher Learning	Heather Meadows, Geoff Kingate, Ev. Humphries, Undergraduate Students, York University
143	Position Statement on Education and the Agricultural Industry	Ontario Institute of Agrologists, Woodstock
144	Who Should Teach in the Community Colleges	R. C. Quittenton, Windsor
145	The Need for a Teacher Preparation Program for Prospective Faculty in the Colleges of Applied Arts and Technology of the Province of Ontario	M. Freedman, Instructor, Department of Health Sciences Education and Evaluation at the State University of New York at Buffalo
146	Duplication of Educational Facilities	W. C. Easton, Burlington, Ontario
147	Investigation into Identity	Hamilton Y.W.C.A., Central Branch
148	Horticulture in the Community College	Stratford Horticultural Society
149	The Basic Decision	Dennis M. McCartin, John XXIII Centre for Adult Education, Windsor
150	Comments on Post-Secondary Education	Alderman Dominic Cardillo, City of Kitchener
151	Reasoned Curriculum Redesign: A Key to Optimizing University Effectiveness Against Expenditures	Dr. G. F. Atkinson, Dept. of Chemistry, University of Waterloo
152	More Effective Career Counselling in the High Schools	Students of St. Mary's School of Nursing, Kitchener, Ontario
153	Canadian Graduate Education in the Sciences	Ross H. Hall, Professor and Chairman, McMaster University, Hamilton, Ontario
154	Are the Traditional Role Definitions in Education Obsolescent!?	L. Lehtiniemi, Conrad Grebel College, Waterloo, Ontario
155	Education, Consultation and Research at the University Schools of Nursing	Ontario Region of the Canadian Conference of University Schools of Nursing, London, Ontario

156	Value of University Continuing Education Courses as Part of Post-Secondary Education	(Mrs.) Jane Rodd, Guelph
157	Attitudes towards Intellectual Freedom at Conestoga College	Ann Redwood, Patricia Dobson, Margaret Day, Conestoga
158	Integrated Studies: An Unstructured Educational Program	Peter Padbury, Student in Integrated Studies, University of Waterloo
159	Education for the City of Stratford	Stratford Chamber of Commerce
160	Proposing Closer Integration of Secondary and Post-Secondary Education	Ontario Secondary School Teachers' Federation
161	Some Thoughts on Post-Secondary Education	Peter B. Mason, President, B.F. Goodrich Canada Limited
162	Case for a Satellite College in Brantford	Brantford Regional Chamber of Commerce
163	Community Post-Secondary Educational Resources and Their Use	Gordon G. Kelly, Algonquin College of Applied Arts and Technology Continuing Education Division, Ottawa, Ontario
164	In Support of Recommendations by the O.R.C.C.U.S.N.	McMaster University School of Nursing, Hamilton
165	Teaching Effectiveness in University and Technical Colleges	W. E. Nevitt, Hamilton
166	Possibilities for Constructive Change in the Community Colleges	Mike O'Dwyer, Al Rimmer, Paul Stacey, Chuck Stoody, Murray Noll, (Members of Conestoga College)
167	Untitled Brief	Association of Canadian Commercial Colleges (Ontario Region), Belleville
168	Suggestions for Nursing Education	Students of St. Joseph's School of Nursing, Hamilton
169	In Support of the Concept that Post-Secondary Education in the Health Disciplines be in Multidisciplinary Educational Institutions	The Four Schools of Nursing in Hamilton:—Hamilton Civic Hospital School of Nursing, Hamilton and District School of Nursing, McMaster University School of Nursing, St. Joseph's School of Nursing
170	Some Issue which may be Forgotten When Considering the Specific Issues Facing Post-Secondary Education in Ontario	Cdr. Bevis Miles, RCN (Ret'd), Co-ordinator of Co-operative Programs, Mohawk College of Applied Arts and Technology
171	The Ecological Impact of the McMaster Health Sciences Centre	Patrick Doran
172	Continuing Education for Nurses	The Inservice Committee of Kitchener, Waterloo, Galt and Guelph
173	Untitled Brief	W. Giverin, Preston
174	Further Comments: Graduate Training and Research	John Buttrick, Downsview
175	Future Role of Graduates of Programs in Physical Health and Recreation Education	Ontario Council of University Directors of Physical Education, Kingston
176	General Comments re Post-Secondary Education	C. R. MacLeod, Director of Education, Board of Education, Windsor

177	**An Integrated Approach to the Teaching of History**	Harold Barnett, History Student, Queen's University
178	**Untitled Brief**	Faculty of St. Joseph's School of Nursing
179	**Teachers Should Teach**	W. J. Carey, Hamilton
180	**Supporting the Multidisciplinary Health Team Approach to Education**	The Hamilton and District School of Nursing
181	**Out of the Bushes and Back on the Road**	Dr. W. G. Breck, Queen's University
182	**Continuing Education in the Kingston District**	Kingston and District Council for Continuing Education
183	**Untitled Brief**	Midwestern Regional Library System, Kitchener
184	**Nursing Education – Diploma Level**	Faculty of Hotel Dieu of St. Joseph School of Nursing, Windsor
185	**Views on the Objectives of Post-Secondary Education**	Alma Mater Society, Queen's University; L'Association des étudiants de l'Université Queen's
186	**The Diploma Course in Nursing Its Place in Post-Secondary Education**	Grace Hospital School of Nursing, Windsor
187	**Education–Kent County's Future**	Chatham Chamber of Commerce
188	**Post-Secondary Education–Comments on Teacher Education**	R. S. Devereux, Windsor
189	**From the Recreationist's Point of View**	The Recreationist's Association of West Central Ontario
190	**The Public Library as a Necessity for Continuing Education in a Community**	Chatham Public Library Board
191	**Foreign Students in Canada**	Canadian Bureau for International Education Bureau canadien de l'éducation internationale
192	**The Need for Comprehensive Counselling and Student Services Programs in the Community College**	The Student Services Division, St. Clair College of Applied Arts and Technology, Windsor
193	**Suggestive Approaches to Operating and Financing Post-Secondary Education**	Raymond L. Meyer, B. Com., R.I.A., M.A., Dean, Algonquin College School of Business
194	**Nursing Education within the Framework of General Education in Community Colleges**	Miss Barbara F. Curry, Miss Norma Fieldhouse, Mr. Aubrey Hagar, Miss Janice Legg, Kitchener
195	**A Regional Basis for Education in Health Sciences Disciplines**	Ottawa Regional Council on Education in Health Disciplines
196	**A Statement of Principle Regarding the Role of Post-Secondary Education in the Humanities and Social Sciences**	Undergraduate Studies Committee of the Philosophy Department of the University of Guelph
197	**Post-Secondary Institute in Brantford**	Brantford and District Labour Council
198	**The Purpose of a University**	John F. Sullivan, Windsor
199	**Language Skills and the University**	The Faculty Members of the Department of English at the University of Guelph

200	Observations of our Industry	A group of people carrying organizational, personnel and management responsibilities in an industrial complex, R. S. Collins, Personnel Assistant to the Works Manager, Alcan Canada Products, Kingston
201	Aims and Objectives of Post-Secondary Education Liberal Arts and Pure Science	Alma Mater Society, Queen's University
202	The Cassette Learning System	K. G. Shoultz, et al, Algonquin College of Applied Arts and Technology, Technical Centre Algonquin Collège des arts appliqué et de technologie, Centre technique
203	Criticism of Bernard Trotter's Study of the Use of Television in University Education	Peter F. Morgan, Assoc. Prof., University of Toronto
204	Recommendations for Study	Faculty Regional School of Nursing, Brockville General Hospital
205	People—Job Matching—With Special Emphasis on the University's Role in the "Wedding Ceremony"	(Mrs.) T. D. Dawes, Thunder Bay
206	The Need for "People First", Future Oriented, Post-Secondary Education	David W. Morgan, Thunder Bay
207	The Goals of Education	Robert Johannson, Kitchener
208	Local Liaison Planning Committees Recommended to Ensure Students an Efficient Transition Through Each Stage of Education	Liaison Planning Committee, Ottawa Carleton Area
209	Untitled Brief	Robt. Irvine, Thamesford
210	The Future Need for a Degree-Granting University in Sarnia	Paul Blundy, Mayor of Sarnia
211	Realistic Modernism	The Extension Students Association, University of Ottawa
212	The Future Financing of Higher Education in Ontario: Benefits, Costs and Student Loans	The Committee on the Economics of Higher Education, Department of Economics, Carleton University
213	Educational Opportunities in the Later Years	The Senior Adult Committee of the Board of Christian Education of the United Church of Canada, Toronto
214	Second Thoughts on the Investment View of Higher Education	Ozay Mehmet, Assistant Professor, Department of Economics, University of Windsor
215	Why is Knowledge, or the Method of Obtaining It, One of the Best Kept Secrets in Our Academic Institutions?	James Martin, Instructor, School of Health Sciences, St. Clair College of Applied Arts and Technology
216	Ridgetown College	Ridgetown College of Agricultural Technology An Institution of the Ontario Department of Agriculture and Food
217	Liberation, Termination and Confirmation	R. C. Quittenton, Windsor
218	To What Purpose is Post-Secondary Education in Ontario?	The Waterloo Chamber of Commerce
219	Thoughts of an Ontario Taxpayer on Education	Arthur Bullied, Oakville

220	Training Required in the Transformer Industry	L. M. Hammond, President, Hammond Manufacturing Company Limited, Guelph
221	Les Collèges communautaires situés à Cornwall et à Ottawa ne repondent pas aux besoins des gens de Prescott et Russell Providing for Teacher Education	Conseil d'éducation, Comté Prescott-Russell; Prescott-Russell County Board of Education
222	Untitled Brief	Kitchener Public Library
223	Planning of Educational Needs	Mr. Ronald Parsons, Member of the Lambton County Board of Education
224	Untitled Brief	F. R. Jones, President, Steep Rock Iron Mines Limited
225	A Training for Contentment in Uselessness or An Honest Search for Opportunity to Exchange Useful Skills and Talents in the Maintenance of Human Dignity, Peace of Mind and Security that Derives from Knowing Society Needs Us . . At Least a Little Bit .	Mr. Terry Hlady, Proprietor, Hlady Home Improvements, Thunder Bay
226	Teacher Education	Lambton County Roman Catholic Separate School Board
227	A General Arts and Science Programme in a College of Applied Arts and Technology and Its Relationship to University Arts Programmes	J. K. Howard, Co-ordinator, Department of English and Humanities, Sarnia
228	A Conflict Within the Post-Secondary Student	H. O. Hughes, Sarnia
229	The Certification of Medical Specialists in Ontario	R. M. MacIntosh, Toronto
230	Diploma Nursing Education in Thunder Bay History of Affiliation with Lakehead University	Lakehead Regional School of Nursing Administration
231	Untitled Brief	Loyalist College, Belleville
232	The Role of the University Research Institute	Institute for Aerospace Studies, University of Toronto
233	Help in the Expansion of Craftsmanship through the Active Participation with Experienced Artist-Craftsmen	The Artisans' Guild of Hamilton
234	The Place of the Public Library in Post-Secondary Education	Ontario Provincial Library Council, Toronto
235	The Needs of the French-Speaking Population of Ontario at the Post-Secondary Level Mémoire présenté à la Commission sur l'éducation post-secondaire en Ontario	L'Association canadienne-française de l'Ontario (ACFO)
236	Community Colleges—Bilingualism, Cost Economics and Teaching, Continuing Education	Five Administrators of Algonquin College, Ottawa (Institutional affiliation for identification only)
237	Development of Post-Secondary Nursing Education in the Province during the Period to 1980 and in General Terms to 1990	University of Toronto School of Nursing
238	Untitled Brief	Fort Frances—Rainy River Board of Education
239	Untitled Brief	Labour Council of Metropolitan Toronto

240	**The Humanities and the Future of Man**	Division I of the School of Graduate Studies in the University of Toronto
241	**Untitled Brief**	Ontario Council of University Librarians Conseil des bibliothécaires d'Universités de l'Ontario
242	**Untitled Brief**	The Canadian National Institute for the Blind, Toronto
243	**Focus: The University and Lifelong Learning, Non-Credit Courses and Public Service**	Louise Colley, Ph.D., Guelph
244	**Untitled Brief**	Corporation of the Town of Ridgetown
245	**Untitled Brief**	The Faculty Members of the Department of English at the University of Guelph
246	**Six Concerns of the York Borough Board**	The Board of Education for the Borough of York
247	**First Aid Training**	Ontario Council St. John Ambulance Association
248	**Untitled Brief**	Association of Certified Survey Technicians and Technologists of Ontario
249	**Untitled Brief**	D. I. Williamson, Ottawa
250	**Universities and Colleges of Applied Arts and Technology—Qualifications and Standards**	K. Bowles
251	**Adult Education Needs of Immigrants and Migrants**	Inter-Agency Council for Services to Immigrants and Migrants
252	**A High School Point of View**	Staff of Atikokan High School
253	**The Fanshawe College Submission to the Commission on Post-Secondary Education in Toronto**	Fanshawe College, London, Ontario
254	**Physical Education—Research and Graduate Studies**	Jack Leavitt (Ed.D.), Gordon Olafson, (Ph.D.), Alan Metcalfe (Ph.D.), Windsor
255	**Undergraduate Classes: A Proposal**	W. D. Meikle, Toronto
256	**Counselling in Ontario Post-Secondary Education**	Kates, Peat, Marwick & Co., Toronto
257	**Untitled Brief**	Association of Ontario Land Surveyors, Toronto
258	**New Education for a New Age**	Sr. St. Michael Guinan, Ph.D., Executive Officer, (Research) Office on Aging & Homes for the Retarded Branch, Toronto
259	**Untitled Brief**	Young Socialists Ligue des jeunes socialists, Toronto
260	**Advanced Education for a Changing Society**	The Board of Education for the Borough of Etobicoke
261	**Untitled Brief**	Ontario Craft Foundation
262	**Untitled Brief**	Joyce E. Denyer (Mrs.), Clarisse M. Henschel (Mrs.), Part-time Degree Students, at University of Toronto

263	Reflections of an Undergraduate	John Bowles, Guelph, Ontario
264	Untitled Brief	The Ontario Committee, Communist Party of Canada, Toronto
265	Untitled Brief	Ontario Federation of Labour, Don Mills
266	Towards an Educative Community	Staff Members, Humber College of Applied Arts and Technology
267	Untitled Brief	Canadian Memorial Chiropractic College, Toronto
268	In Support of Expanded Educational Opportunities in Medicine for Ontario Students	Harold E. Stafford, Q.C., M.P., Toronto
269	Cornwall's Need of a University Campus Nécessité d'un campus universitaire à Cornwall	Cornwall Association for University Extension, Association de Cornwall pour extension universitaire
270	Untitled Brief	Association canadienne-française, secteur est de l'Ontario, Hawkesbury
271	Development of Post-Secondary Education in Ontario Over the Next Twenty Years	Town of Sioux Lookout
272	Post-Secondary Educational Opportunities for the Indian Student	J. A. Fraser, Kenora
273	Untitled Brief	The Kenora Advisory Committee to Confederation College
274	Teaching Training	Members of the Toronto Board of Education
275	Andragogical Implications	Ontario Association for Continuing Education
276	Part-Time Students and Post-Secondary Education	Association for Part-Time Undergraduate Students (University of Toronto)
277	From Preparatory to Continuing Education: A Proposal	Dr. F. Vernon, Toronto
278	The Centre for Christian Studies	Centre for Christian Studies, Toronto
279	Teacher Education	The Ontario Teachers' Federation
280	The ROM and Adult Learning	The Royal Ontario Museum, Toronto
281	Untitled Brief	Graduate Student Union, University of Toronto
282	The Next Steps in Higher Education	Ontario Confederation of University Faculty Associations, Toronto
283	The Creation of Learning Environments—The Citizen's Right to Information	MetroDOC (Metropolitan Toronto Data Bank/Directory of Continuing Education), Toronto
284	A Personal Criticism of the St. Lawrence College Brief	S. Goldstein, Kingston
285	Untitled Brief	C. W. King, Secretary, ACCC (Private Business Schools), Thunder Bay
286	French: Not Exclusively for the French	Roger Guindon, O.M.I., Ottawa, Ontario
287	Educational Policy Concerning Hospitals	Ontario Hospital Association, Don Mills

288	Role of the Art Gallery of Ontario in Relation to Post-Secondary Education	Art Gallery of Ontario, Toronto
289	Pré-mémoire soumis par l'Association des enseignants franco-ontariens	L'Association des enseignants franco-ontariens, Ottawa, Ontario
290	Brief by the French Language Advisory Committee of The Ottawa Board of Education	The Ottawa Board of Education Le Conseil scolaire d'Ottawa
291	Community Colleges and Training in Physical Education	P. J. Gallasso, Ph.D., Dean, Faculty of Physical and Health Education, University of Windsor
292	Transferability Among High Schools and Universities	Thomas F. Shaffer, Jr., Toronto
293	Transferability Between Technological Institutes and Universities	Computing Devices of Canada Limited, Ottawa
294	Report of the Study Committee on Recreation Services in Ontario 1970	Ontario Recreation Society and the Society of Directors of Municipal Recreation of Ontario, Toronto
295	Post-Secondary School Education	Cornwall and District Labour Council
296	Comments on Six + One Provocative Questions	Wolfgang Lilie, Willowdale
297	Post-Secondary Education in Ontario: A Statement of Issues	William Langdon, B.A., M.B.A., Mississauga
298	Proposal for an Act to Recognize by Certification Technologists and Technicians	The Ontario Association of Certified Engineering Technicians and Technologists, Toronto
299	Role of the Community Colleges Concerning Grade 13 Graduates	David B. Holmes, Head of Guidance Services, Central Elgin C.I.
300	Project Facts: (First Aid Community Training for Safety)	Ontario Council, St. John Ambulance Association, St. John Ambulance Brigade, Toronto
301	Old-Fashioned Views on the Nature and Function of the Modern University in Ontario with a Few Special References to Lakehead University	Lakehead University Faculty Association
302	A Concept of Regional Adult Education (Quad Cities Concept)	A. Allan Beveridge, Waterloo, Ontario
303	Location of the Next Medical School	Committee on the Location of the Next Medical School, Ontario Medical Association, Toronto
304	Public Library Standards	Canadian Library Association Association canadienne des bibliothèques, Ottawa
305	Private vs. Public Vocational Education	W. Gerald Fulton, P. Eng., Brampton
306	Technological Education	R. J. Ward, Keewatin
307	Educational Problems Concerning Public Health Inspectors	Public Health Inspectors, London
308	Management Accounting	The Society of Industrial Accountants of Ontario, Hamilton
309	University Adult Education and Summer Schools	Ontario Department of Extension and Summer Schools, Peterborough

310	Post-Secondary Education in Chatham, Ontario	Peter D. Clark, Chatham
311	Public Health Inspectors	Joseph P. Crossman, London
312	Financing Higher Education	W. Lee Hansen and Burton A. Weisbrod, Madison, Wisc., U.S.A.
313	The Changing Universities	John Stobo Prichard, M.B., F.R.C.P., The Hospital for Sick Children, Willowdale
314	The Role of CAATs and the Universities	Charles M. Carmichael, Prof. of Geophysics, London
315	Indians of Sault Ste. Marie	Keewatinung Anishabe Institute
316	WUSC and the Canadian University Community	World University Service of Canada, Toronto
317	Organized Education in Science and Society	Roger Taguchi, Dept. of Chemistry, University of Toronto
318	Role of Algonquin College	The Board of Governors of Algonquin College
319	Relationships Between Universities and Cities	Brian Turnbull, Waterloo North Progressive Conservative Candidate
320	French Speaking Students of Ontario	Student Government of l'Ecole secondaire Saint-Laurent de langue française, St. Columban's Parish Hall, Cornwall
321	The Matrix Type of Organization	J. E. McLachlen, C.D., B.A., B.Ed., C.L.U., P.Ag., Ottawa
322	Instruction in the Language of Employment	St. Lawrence College, Cornwall
323	Nursing Education	Hamilton and District School of Nursing (Student Body)
324	Provision of Agricultural Education at the Local Level	Oxford County Board of Education, Woodstock
325	Adult Education	Charles Abshez, C.G.A., R.I.A., Toronto
326	A Canadian Engineering Manpower Council	Canadian Council of Professional Engineers, Ottawa
327	The Unique Character of Colleges of Applied Arts and Technology	Ontario Council of Regents, Toronto
328	Nursing Education in Ontario	Registered Nurses' Association of Ontario, Toronto
329	University Education	Students Enrolled in the Course Philosophy of Education, at the University of Guelph, under the direction of Dr. T. W. Settle.
330	Women in Post-Secondary Education: An Approach to Improved Participation	Lynn McDonald—Department of Sociology, McMaster University, Hamilton, Ontario
331	Report on a Student Questionnaire Distributed at Toronto Teachers' College April 1971	Toronto Teachers' College Students
332	Jobs, Post-Secondary Education and a Better Society	D. M. Hedden, Hamilton
333	Continuing Education	(Mrs.) Maya Etkin, B.A., M.Ed., Downsview
334	Untitled Brief	Ontario Chamber of Commerce

Public Hearings of the Commission

APPENDIX B

Place	Date
Toronto	November 12, 1970
Sudbury	December 9, 1970
St. Catharines	December 14, 1970
London	December 16, 1970
Sault Ste. Marie	January 11, 1971
Timmins	January 13, 1971
North Bay	January 18, 1971
Peterborough	January 20, 1971
Oshawa	January 25, 1971
Barrie	March 17, 1971
Toronto	March 24, 1971
Kitchener	April 1, 1971
Hamilton	April 6, 1971
Kingston	April 15, 1971
Toronto	April 16, 1971
Windsor	April 20, 1971
Sarnia	April 22, 1971
Guelph	April 27, 1971
Ottawa	April 29, 1971
Kenora	May 4, 1971
Thunder Bay	May 5, 1971
Cornwall	May 11, 1971
Toronto	May 13, 1971
Toronto	May 14, 1971
Toronto	May 26, 1971

Commission Studies

APPENDIX C

A. Introduction

The information requirements of the Commission have been met in a number of different ways: through the briefs and hearings outlined in Appendix A, through a program of study visits made by Commissioners, and through the series of background studies commissioned on particular topics. These studies vary greatly in approach, scope, and objectives, but may be divided for ease of reference into four main categories: a monograph dealing with the development of social indicators for use in educational and social planning; reports arising out of special assignments given to the Commission by the government; major studies assigned to outside contractors; and a series of in-house papers prepared by the Commission staff.

Several of the contracted studies listed below arose from the Commission's initial solicitation of research proposals and the subsequent work of the Commission's Research Committee. The rest are the result of a detailed review of the Commission's information requirements made in the spring of 1971. This review permitted the staff of the Commission to identify the specific topics on which additional information appeared to be needed and to draw up detailed specifications for a series of background studies. The individual studies so defined required different treatments: some involved primary research involving collection of empirical data and application of sophisticated techniques of analysis and interpretation; others required mainly surveys of existing literature and the review and interpretation of secondary sources. All the former were contracted out to professional researchers possessing the necessary skills and resources. This was done by inviting qualified individuals or firms to submit tenders based on the study specifications drawn up by the Commission staff. Contracts were awarded on the basis of quality, time, and cost considerations.

Some studies of the second type were also contracted out on the same competitive tendering basis when it appeared that familiarity with the subject matter or the possession of some special expertise would expedite execution of the study. Otherwise, studies of this type were assigned to the in-house staff. These in-house studies were usually smaller undertakings which did not require, or warrant, the time and effort involved in arranging and monitoring a contract.

This program of contracted and in-house studies was designed to feed into the process of Commission deliberation in such a way as to support the production of this draft report. This was made possible by the co-operation and, in many instances, remarkable expenditure of effort provided by our contractors, most of whom were able to carry out their work in only four or five months' time. It was recognized, however, that a limited number of studies which involved large-scale surveying or data processing would not be completed in time for their final results to be assimilated in the draft report. These information inputs, as well as those supplied by the second series of public hearings and other responses to the draft report, will be reflected in the Commission's ***Final Report.***

B. Social Reporting and Education Planning: A Feasibility Study Prepared Under the Supervision of Commissioners D. M. Black and J. S. Kirkaldy

This study originated in the efforts of the Research Committee to formulate the terms of contract for an analytical study of post-secondary education, in the course of which the members gained the perception that the most problematic and interesting aspects of the subject did not enter within the confines of a conventional cost-benefit study. This feasibility study examines the possibilities for dealing with the spillover effects of education, recognizing that the social benefits cannot be viewed in isolation from the totality of welfare services. The study develops the case for a "total social report" by (i) elucidating the theoretical and methodological problems of social reporting; (ii) producing an outline of a social report with emphasis on the educational elements; and (iii) indicating the data needs, contributing agencies, and locales for production of such a report.

The report embodies the following main sections:

"Stability, Public Order, and Safety"
"The Physical Environment"
"Income and Poverty"
"Health and Illness"
"Adaptability–Societal Transformations and Mobility"
"Research and Development, Entrepreneurship and Innovation"
"Learning Science and the Arts"

C. Special Assignments

"Post-Secondary Education in Northwestern Ontario"
In a letter dated February 11, 1970, the Honourable William G. Davis, then Minister of University Affairs, directed the Commission to study the nature and extent of post-secondary education that can be offered in the small and medium-sized communities of Ontario. In particular, he asked the Commission to assess the situation in Thunder Bay with respect to the responsibilities of Lakehead University and Confederation College and the degree of co-operation and/or integration that might be carried out between the two organizations in order to best serve the educational needs of the people of the Lakehead district and, indeed, of all of Ontario. A draft report, circulated late in 1970, was used as a basis for further discussion, and a final report has now been published.

"Post-Secondary Education in North Bay and Sault Ste. Marie"
In a letter dated April 9, 1970, the Minister of University Affairs and of Education directed the Commission to extend the above study to cover post-secondary education in North Bay and Sault Ste. Marie. A draft report was circulated for distribution and discussion with interested parties in October 1971.

"Duplication of Agricultural Courses in Ontario"
On May 5, 1971, the Commission was directed to consider and report on the duplication of agricultural courses with particular reference to the course offered at Fanshawe College. The Commission is studying the matter and expects to report shortly.

On May 19, 1971 the Honourable John H. White, Minister of University Affairs, invited the Commission's advice on the structure of the new Department of Colleges and Universities and its advisory bodies. The Commission considered the matter and reported to the Minister on June 10, 1971. An interim structure was suggested pending completion of the Commission's deliberations.

D. Contracted Background Studies

"Adult Education in Ontario", Professor D. Stager and R. Wickett, University of Toronto. A survey of adult education in Ontario, its history, current status, and

financing. The study includes a consideration of some problems of research in the field of adult education.

"Certification in Post-Secondary Education", Applied Research Associates. A description and critical assessment of the merits and shortcomings of the present forms of certification used in Ontario. A systematic framework is developed within which the legitimate functions of certification are identified and their impact on the individual, the educational system, and the community are assessed.

"The Changing Nature of Post-Secondary Education: Attitudes, Costs, and Benefits", E. Harvey and J. L. Lennards, Ontario Institute for Studies in Education. A review of attitude studies in relation to post-secondary education, including a discussion of the implications of cost and benefit studies of higher education, the effectiveness of the university as an agent of attitude change, and equality of educational opportunity in Canada.

"Collective Bargaining", Kates, Peat, Marwick & Company. An examination of the merits of collective bargaining in post-secondary educational institutions in relation to alternative methods of salary determination for teaching staff and faculty.

"Co-ordination of Administration and Policy Formulation of Post-Secondary Education in Ontario", Applied Research Associates. A description of functions, organization, and inter-relationships of present government departments, advisory bodies, agencies, and other institutions involved in post-secondary education. The study considers methods by which policy formulation and administration in this area might be improved with regard to considerations both of economic efficiency and public accountability.

"Cost and Benefit Study of Post-Secondary Education in the Province of Ontario: School Year 1968-69", Systems Research Group Inc. A study of the economics of post-secondary education conducted in terms of quantitative analysis of its costs, benefits, and redistributive effects. Three separate but inter-related models are developed to analyze these three aspects of post-secondary education. The simulation capability built into this analytical system permits its use in experiments employing different sets of parameters and hypotheses.

"The Economics of Post-Secondary Education", Systems Research Group Inc. A non-technical general review of the literature on the economics of post-secondary education, with particular attention to supply (cost) factors.

"Education and Employment of Arts and Science Graduates: The Last Decade in Ontario", E. B. Harvey, Ontario Institute for Studies in Education. A study of the employment experiences of a selected sample of Arts and Science graduates from four Ontario universities. Students graduating in 1960, 1964, and 1968 were interviewed to discover how useful they feel their education was as preparation for their jobs, what kinds of educational experiences they had, and how they fared upon entering the labour market after graduation.

"Educational Preferences of Ryerson Students in Relation to Their Socio-Economic Background and other Background Characteristics", W. Semple, Ryerson Polytechnical Institute. A study of the patterns of student preference and demand in post-secondary education, especially as they are influenced by social and economic factors.

"Ontario Colleges of Applied Arts and Technology", Systems Research Group Inc. An assessment of the present and potential future roles and functions of the Ontario colleges of applied arts and technology in relation to this province's requirements for post-secondary education.

"Evaluation", Sterling Institute Canada Limited. This study identifies and assesses the methods currently used to evaluate students in Ontario's post-secondary institutions and explores some of the alternative methods of evaluation that may be available. The focus is on the more formal methods of evaluation used in the assessment of students during the admissions process, in the course of their studies, and upon completion of studies prior to the awarding of credits, degrees, and diplomas.

"Financing Post-Secondary Education", Systems Research Group Inc. A survey of alternative methods of financing post-secondary education, with particular reference to their probable effects on the size and composition of demand for places in post-secondary institutions.

"Guidance", Hickling-Johnston Limited. This study describes and assesses the performance of guidance and counselling facilities and programs currently being operated in Ontario.

"Legal Education in Ontario", Andrew Roman and Associates. A detailed study of the issues facing legal education in Ontario today, with particular emphasis on the post-LL.B. stages.

"Libraries and Information Storage and Retrieval Systems", Kates, Peat, Marwick & Company. A description of present library and other information storage and retrieval facilities used in Ontario, with an assessment of the implications of technological developments for the future organization and operation of these facilities.

"Manpower Forecasting and Educational Policy", J. Holland, M. Skolnik, S. Quazi and F. Siddiqui, Ontario Institute for Studies in Education. A consideration of the extent to which it is socially desirable and technically feasible to take projections of manpower requirements into consideration in formulating educational policy. One part of the study presents selected data on highly qualified manpower in Ontario, illustrates by detailed example the methodology of making projections, and provides projections of highly qualified manpower requirements to 1990 under a variety of assumptions about the rate of growth of output, trends in occupational co-efficients, and other relevant economic factors. Another part of the study addresses the methodology of projecting university and college enrolment and presents projections based upon both transfer matrices and participation rates.

"Manpower Retraining Programs in Ontario", Sterling Institute Canada Limited. A description and critical evaluation of existing programs of manpower retraining available in Ontario. Alternative approaches to providing such services are considered.

"The Organization of the Academic Year", Woods, Gordon and Company. A description of the options available in the organization of the academic year and a study of their relative merits. The effects of the various alternatives on operating and capital costs of post-secondary institutions are explored by means of computer modelling.

"Post-Secondary Art Education", S. A. Amenta, Ontario Institute for Studies in Education. A comprehensive discussion of the major issues relating to art education in Ontario, including an examination of the "demand" for art and art education in this province.

"Post-Secondary Educational Opportunities for the Ontario Francophone Population", R. B. D'Costa, University of Ottawa. A study of the Francophone population of Ontario, its history, present size and composition, and socio-economic characteristics, all of which are considered in relation to presently available French-language and bilingual post-secondary educational facilities in Ontario.

"Post-Secondary Educational Opportunity for the Ontario Indian Population", The Environics Research Group. While not presuming to represent the views of the Indian people of Ontario on the subject, nor to articulate appropriate goals for them to seek, this study assembles relevant background information concerning the educational opportunities available to Indians and explores some of the possible options whereby government policy may be made more responsive to the self-perceived educational needs of Indians in Ontario.

"Professional Education: A Policy Option", P. Slayton and H. Ryml, Applied Research Associates. An examination of the special nature and problems of professional education in Ontario. The theoretical framework developed seeks to relate the relevant interests of the individual, the interests of the professional associations and professional segments of the academic community, and the interests of the larger Ontario community to which the individuals and professional associations belong, with a view to detecting disharmonies which may be alleviated by new professional education policies.

"The Quality of Teaching", Sterling Institute Canada Limited. A survey of criticisms and concerns which have been expressed about the quality of teaching in post-secondary education and an investigation of practical means for improving the responsiveness of teachers, administrators and others to changing educational needs and expectations of students and the larger community. The study critically examines current methods of evaluating teacher performance and proposes alternative approaches.

"Research in Post-Secondary Institutions", A. H. Smith, University of Toronto. A consideration of the conse-

quences of university organization for the conduct and nature of research and the consequences of the funding of research for the structure of the institutions in which it takes place.

"Ryerson Polytechnical Institute Students' Occupational Expectations and Aspirations and their Realization in Relation to Socio-economic Background and Other Background Characteristics", W. Semple, Ryerson Polytechnical Institute. A study of the occupational expectations and aspirations of Ryerson Polytechnical Institute students before they graduate and of how and to what extent their expectations and aspirations are realized and modified four months and nine months after they have graduated.

The "Stop, Look, Evaluate, Report on Education" project, N. Godfrey and I. Hale. A report to the Commission on Post-Secondary Education based on a study conducted by two Ontario high school students into the attitudes and needs of secondary school students relative to post-secondary educational systems.

"A Survey of User or 'Consumer' Opinion Relating to Post-Secondary Education in Ontario", The Environics Research Group. An inclusive omnibus survey of opinions held by selected samples of students, teachers, businessmen, and other employers concerning the nature, adequacy, strengths, and shortcomings of post-secondary education in Ontario.

"Transferability", Sterling Institute Canada Limited. An investigation of the present arrangements affecting student transfers from one post-secondary institution to another, and from one course or program to another within these institutions.

"Universities and Colleges in Ontario and Their Role in Research and the Production of Knowledge", E. L. Holmes, University of Waterloo. A review of the present and foreseeable role of Ontario universities and colleges in the expansion of knowledge.

"The Utilization of Electronic Technology in Post-Secondary Education in Britain and West Germany", N. McLean. A description and critical analysis of the experience of the Open University in Britain and of Telekolleg, Funkolleg, and the Institute for Remote Studies in West Germany. The history, financial aspects, and operating problems of these systems are examined and some of their implications for future possible developments in Ontario are discussed.

E. Papers and Statistical Compilations by the Commission Staff

"British and American Influences on the Development of Education in Ontario". A description of the British and American roots of the Ontario educational system, the channels through which these influences were transmitted to Ontario, and the specific manifestations of these influences in the universities and colleges of this province.

"Certification". A study of the procedures presently used in Ontario to admit applicants to the professions and to certain occupations.

"The Changing Role of Government in Education: An Historical Review of Public Policy in Ontario Education". Traces the historical development of the role of public policy in Ontario education, with particular attention to more recent developments affecting universities in this province.

"The Development of Adult Education in Canada: An Historical Overview". Supplements the background study by Stager and Wickett by tracing in some detail the historical development of adult education in Ontario, and in the country as a whole. The paper seeks to identify the "philosophy" behind the adult education movement and to show how the earlier ideas have developed into the broader concept of "continuous learning".

"The Doctorate of Science Degree". A description of the Doctorate of Science degree awarded in the United Kingdom.

"Educational Levels Attained by the Populations of Canada and Ontario". A statistical survey of formal educational attainments of the population.

"Federal-Provincial Committees". A listing of committees on which the federal government is represented in the same way as a single province.

"Growth and Structural Change in the Ontario Economy". A survey of the main trends in the historical

development of Ontario's economy with particular regard to factors associated with the demand for, and the supply of, educational services.

"An Historical Overview of the Development of the Canadian Educational System with Special Reference to Ontario". This paper outlines the development of colleges and universities in Canada and identifies the principal trends that have characterized their development in both the French and the Anglo-American traditions present in this country.

"Medical Education in Ontario". A survey of present educational requirements for the major health disciplines and of recommendations for change made in the recent reports of the Ontario Council of Health, the Royal Commission on Health Services, the Ontario Committee on the Healing Arts, and the Quebec Commission of Inquiry on Health and Social Welfare.

"Ombudsman Legislation". A review of legislation in Canada and abroad establishing the office of "ombudsman".

"The Ontario Educational System: Historical Statistics". A compilation of statistical time series covering numbers of institutions, enrolments, and other aspects of post-secondary education in Ontario since 1850.

"Part-Time Students". A collection of statistics identifying the number and various types of part-time students in Ontario.

"Population and Socio-Economic Projections for Selected Ontario Centres". Compilation of projections for Brantford, Orillia, Oshawa, Chatham, and Sarnia.

"The Position of Women in Post-Secondary Education". A compilation of statistical data defining the enrolment of women in graduate and undergraduate programs in Ontario and the employment of women as faculty and administrators in post-secondary institutions.

"Professional Education in Ontario: An Historical Overview". Surveys the development of professional education in Ontario in three main fields: legal, medical, and the engineering and applied sciences.

"Publicly Supported Institutions in the Arts". A list of government agencies and publicly supported institutions dealing with the Arts in Ontario, their expenditures and sources of income.

"Recent International Trends in Post-Secondary Education". This paper surveys recent trends in post-secondary education in Sweden, France, Japan, and West Germany, and identifies major trends common to them all.

"The Role of the Federal Government in Post-Secondary Education". Although education was assigned to the exclusive jurisdiction of the provinces by the British North America Act, the federal government has been involved in education in a variety of ways. This paper identifies the historical development of this federal role from the Agricultural Instruction Act of 1913 to the reorganization of federal financial support for universities in the late 1960s. Particular attention is given to the federal role in financing university research.

"Safeguards Against Abuse of Computer Information Storage Systems". A search for legislation in Canada and the United States designed to protect the individual against the misuse of computer-stored personal information.

"Socio-Cultural Influences on Education in Ontario". A survey of selected social and cultural characteristics of the Ontario population considered relevant to the size and structure of the demand for educational services in this province.

"Student Assistance Programs". A checklist of student assistance programs in Ontario by type of program, eligibility requirements, and expenditures.

"Testing". An investigation of the use of traditional subject-oriented examinations and of psychometric testing to select students for admission to post-secondary educational institutions, and for evaluating their "performance" after admission.

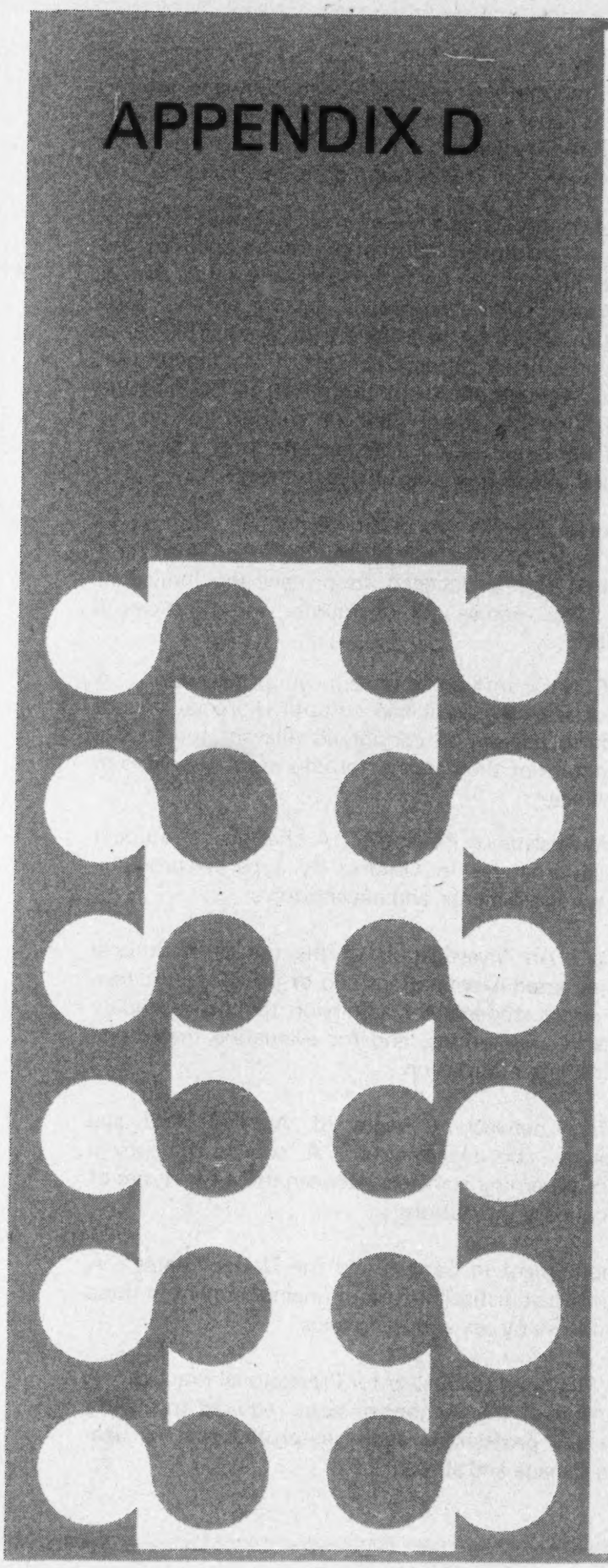
"Transfers between Colleges of Applied Arts and Technology and Universities". A survey of current practices governing transfers between these two types of post-secondary institutions.

"Unemployment in Canada and the United States". A comparative statistical survey of unemployment in these two countries by sex and age groups.

"Years Required to Qualify for Professional Practice". A comparison of the number of years required to qualify for various professions and semi-professional occupations in Canada and abroad.

Statistics on Enrolment and Finance

APPENDIX D



Introduction

This appendix provides a compilation of data, analyses and projections. It complements and supplements the main text of the report in the sense that this detailed information illuminates the report in quantitative terms.

The tabulations are developed on the basis of the census years 1951, 1961, 1971, with projections to 1981 and 1991. Our search for meaningful data has revealed some astonishing voids. Much of the historical data essential for policy review and formulation either simply does not exist or is not in usable form. Where data do exist there are often inconsistencies in definitions. In order to put together the quantitative picture desired for this appendix it has therefore been necessary in many cases to use estimates and derived figures. Moreover, data reported for various years may be inconsistent between fiscal years, academic years, and calendar years.

The Commission was instructed in its terms of reference to look forward 20 years. Looking back 20 years, in symmetry, we see the ebbing of the influence of the depression and the post-war surge of ex-service enrolment in universities and colleges. While some of the qualitative features of post-secondary education in Ontario in 1971 might have been envisaged in 1951, no one at that time would have been rash enough to project the quantitative reality of enrolment and expenditure on post-secondary education that has developed in the late 1960s. In fact, had such projections been developed in 1951 they would not have been believed in any event. In much the same way, many of the projections relating to education that are contained in this appendix are to be seen not so much as predictions or forecasts of future actuality so much as the results of extrapolation of recent trends and directions.

The projections relating to post-secondary educational enrolment and costs are necessarily based upon the assumption that recent trends will continue. The role of the Commission has, of course, been to examine such assumptions and trends and suggest desirable changes. In the measure to which our recommendations are accepted and implemented, to that measure the projections contained in this appendix will tend to become invalid. Inasmuch as we argue strongly for a system of post-secondary education responsive to the needs of the people of Ontario, rather than a centrally determined

system, it is difficult to project in precise quantitative terms the influences that the recommendations would have on enrolment.

In general terms, the recommendations, if adopted, would lead to some diminution of enrolment of those not seriously committed to learning; on the other hand, they would lead to increased enrolment and participation of adults generally and people of modest means particularly. On the financial side, the recommendations suggest increased subsidies for some students and decreased subsidies for others. It is hoped that some projections reflecting estimates of the impact of our recommendations can be developed in time for inclusion in our final report.

Demography

The charts and tables in this section identify in various ways the significance of the changing demography of Ontario in the period from 1951 to 1991, as it relates to the planning and financing of post-secondary education.

Through a combination of natural increase, immigration from other parts of Canada, and immigration from other countries, the population of Ontario has increased and continues to increase very rapidly, as compared with almost any other jurisdiction. More particularly, as revealed strikingly by the population trees (Chart D-3), there has been a series of "waves" of population. The first of these waves led to the great expansion of elementary and secondary education in the early and mid 1960s and was the principal cause of the expansion of post-secondary education in the later 1960s. This same wave will lead Canada's pool of labour during the next five years or so to increase more rapidly both in percentage and absolute terms than that of any comparable country in the world.

While the challenge of providing employment for this greatly increased labour force is now the source of intense preoccupation in Canada, it should be noted that we already have behind us the period when we had the greatest portion of dependent population in school and university as related to the working population.

The decline in birthrate in the mid and late 1960s led to the decline in elementary school enrolment already experienced. In turn, the population aged 18 to 24, from which most university and college students have traditionally been drawn, will soon plateau and then decline. This is reflected in Table/Chart D-4. The population of 18-year-olds more than doubled from 1951 to 1971, with most of the increase occurring in the 1960s. In the next 10 years there will be a modest increase in the number of 18-year-olds, reaching a peak about 1980, with the number then declining so that the figure for 1991 returns almost to the level for 1971.

Table/Chart D-5 reveals the differential rates of growth in the different regions of the province, and with Table/Chart D-6 indicates the extent of the concentration of population in urban areas.

Labour Force and Economy

This section contains data showing trends in the labour force, the structure of employment, and the gross provincial product.

The growth of the labour force is shown in Table/Chart D-7, and in turn expressed as a percentage of the population in Table/Chart D-8. This table shows the results of the demographic trends outlined in the previous section, with the minimum proportion of the population in the labour force occurring in the early 1960s when a large proportion of the population was in school and continually rising proportions thereafter through the 1970s.

Table/Chart D-9 show the distribution of the labour force in Ontario as between primary, secondary and service sectors. Regrettably, no projections appear to be available for the later 1970s and 1980s. Past changes are striking. The primary sector has declined, while the secondary sector has grown only slowly. Rates of growth in the service sector have been very rapid.

The Canadian gross national product and Ontario's gross product are shown in Table/Chart D-10. For the years from 1951 to 1971, values are expressed in current dollars. Projected values for 1976 and 1981 are based upon the GNP increasing at a fraction over five per cent per annum compounded in real terms. This corresponds with the potential of the Canadian economy and similar figures have been used in the work of the Economic Council of Canada and the Organization for Economic Co-operation and Development. The values are expressed

in terms of constant 1971 dollars. Whatever rates of inflation occur would have to be compounded with these numbers.

Enrolment

Enrolment history and projections for different sectors of education are shown in the Table/Chart D-11, D-11a. The historical data identify the striking growth in attendance that has characterized the past 20 years.

The projections relating to post-secondary education must be examined with some caution. As the footnotes indicate, most of the projections reflect work in which it was assumed that there would be continuity in trends and tendencies, as well as in policies affecting attendance. The experiences in the fall of 1971 only confirm that the techniques of enrolment projection do not predict new social trends and influences. No less difficult is the estimation of the influence of our recommendations, as already discussed in the general introduction to this Appendix.

The trend analyses shown here already indicate substantially lower university enrolments than those projected otherwise in recent years.[1] This in large part reflects the technical methods employed.[2]

The weakness of the trend projection method is shown most clearly in the data on projected graduate enrolment. While this sector has indeed grown more rapidly than undergraduate enrolment in the 1960s, and accordingly leads to the extrapolations shown here, social and other influences, as well as the experience of the last two years, suggests that future rates of growth in graduate enrolment will certainly be more modest. In the last projection of Appendix D-6, adjusted data is used for graduate enrolment in 1976-77 and 1981-82.

The omission of enrolment projections for the "other" sector of post-secondary enrolment reflects uncertainties about the rate of merging the teachers' colleges into the universities, and the nursing schools into the colleges of applied arts and technology.

Educational Finance 1951-1971

Tables D-12, D-13 and D-14 present major cost components[3] for post-secondary education and education generally for the period 1951-71. From this data it is possible to put together a composite picture of the cost of education in Ontario over the past 20 years, which can in turn be related to our population and wealth, as shown in Table D-15.

It is important to note that the costs shown in these tables reflect total operating costs, while the enrolment figures shown include full-time students only. No consistent reporting of the full-time equivalent of part-time enrolment is available over the time span of interest. It is important, however, to use consistent data for the sake of comparative analyses, and to provide a basis for projections. Since the full-time equivalent of the part-time enrolment is currently some 15 per cent of total full-time university enrolment, average unit cost per total full-time equivalent enrolment would be some 15 per cent lower than the average cost per full-time enrolment shown in Table D-12.

Table D-15 shows operating and capital costs of the institutions of post-secondary education, under three categories: universities, colleges of applied arts and technology, and other, which includes Ryerson, the College of Art, nursing schools, and teachers' colleges. This in turn is combined with the operating and capital costs of the public elementary and secondary school system to give an indication of the total operating and capital costs of Ontario's public system of education. The increases are striking. To be understood, they need to be related to population and productivity.

The second section of the table shows the costs on a per-capita basis while the third relates educational costs to the gross provincial product. Whereas the indicated total spending (in current dollars) on education in 1971-72 is 15 times what it was in 1951-52, the share of the total product of the province given to education in 1971-72 is only three and one-half times what it was in 1951-52.

1 Wolfgang M. Illing and Zoltan E. Zsigmond, ***Enrolment in Schools and Universities 1951-52 to 1975-76***, Ottawa Economic Council of Canada, 1967 (Staff Study No. 20).

2 J. Holland, M. Skolnik, S. Quazi and F. Siddiqui, ***Manpower Forecasting and Educational Policy.*** (A report prepared for the Commission on Post-Secondary Education in Ontario, August 1971.)

3 The components included are defined as reported because of limitations in some series of data. They do not include all cost components included in some reports by Statistics Canada.

The contrast in the two ratios reflects, of course, the great increases in population and production that have occurred in Ontario in the past 20 years.

Capital costs in education are financed in various ways. Since 1964, university capital costs have been financed through the Ontario Universities Capital Aid Corporation, which provides for 30-year amortization. In elementary and secondary education, capital costs are sometimes funded out of current revenues. For the analyses here, and for the projections, capital is treated as a current cost according to the year in which the cash flow for capital projects occurred.

Educational Finance 1971-1981

This section presents projections of the costs of post-secondary education, and education generally, for the coming decade. It is important to emphasize that these are projections—not predictions. Projections are established by estimating trends in major parameters, with other factors assumed constant. The assumptions are noted below, and the results shown in Table D-16. Alternative projections can, of course, be developed with alternative assumptions.

Most importantly, the projections do not reflect the impact of the Commission recommendations. They do reflect general current patterns and trends continued through the 1970s. As noted at the outset of this appendix, our recommendations, if implemented, would have influences on enrolment trends that are difficult to estimate. The adoption of some of the recommendations might result in decreased enrolments while adoption of others might lead to increased enrolments. Similarly, the recommendations dealing with finance suggest more generous subsidies in certain cases, and reduced subsidies in others. When uncertainties about the influence of the recommendations on enrolment are compounded with the uncertainties about finance, the result is difficult to estimate. For our final report, we hope that some estimates can be made of these influences. In the meantime, it seems likely that the projections contained in this section provide a realistic indication at least of the order of costs that may be encountered in the 1970s.

All the cost figures shown are expressed in terms of constant 1971 dollars. Whatever rates of inflation occur would have to be compounded with these numbers. The analyses are presented in several sections. In each, the first column, for 1971-72, reflects current data and estimates (*see* Table D-15) and therefore serves as the base for the projections for 1976-77 and 1981-82.

The first section of Table D-16 deals with public elementary and secondary education. Total enrolment is expected to decline by 8.4 per cent over the decade, whereas current total operating and capital costs are projected to increase at 1.5 per cent per annum. This would provide a real increase in per-pupil costs of 26 per cent over the decade.

The second section relates to universities. Projected enrolment reflects the figures from Table D-11 for undergraduate enrolment. For graduate enrolment, a rate of increase only half that shown in Table D-11 has been used. This assumption keeps the proportion of graduate to undergraduate students relatively constant at the level of 1970.

It is important to note that these are projections of full-time enrolment. While, as noted in Appendix D-5, it would be preferable to deal with full-time equivalent enrolment (that is, full-time enrolment and its equivalent in part-time enrolment), it is difficult to do this on a consistent basis over the 1951-1981 span. Historical records are not good enough to provide for consistent analysis. University operating costs reported in Table D-12 thus include the costs of education for part-time students not included in the enrolment data. The projections are based upon university operating costs expressed on a simple per-student basis, held constant over the decade.

For capital costs, two components arise. The first is the provision of capital for growth to accommodate expanded enrolment. Average annual rates of growth in the years in question are calculated and capital costs estimated at $7,000 per place, reflecting current standards. Beyond this, an allowance is made for renovation and replacement at an annual cost corresponding to three per cent of the cost of replacing the present stock of buildings.

For the colleges of applied arts and technology, enrolment projections are also drawn from Table D-11. Unit operating cost in 1971 is $2,400 per student on a full-time basis, as shown in Table D-12. The colleges have recently been put on an operating grants formula in

which some scale influence has been provided. As enrolment increases, unit costs would then decline, roughly as shown. For capital costs, corresponding assumptions are made as in the case of the universities.

For the "other" sector of post-secondary education, including Ryerson, the College of Art, the nursing schools, and the teachers' colleges, actual cost in 1971-72 is approximately $70 million. Noting that the teachers' colleges are in process of transferring to the universities and many of the nursing schools are transferring to the colleges of applied arts and technology, it becomes very difficult to project enrolment for this sector precisely. It is therefore assumed, conservatively, that the total cost level for the "other" sector will remain constant through the decade.

The resulting total costs are then expressed, in a fashion similar to that in Table D-15, on a per-capita basis, and as percentages of the gross product of Ontario.

Contrasting the great increases of the past two decades shown in Table D-15, these projections for the 1970s indicate only a modest rate of increase in cost per capita, and a decline in the share of the gross provincial product devoted to education.

Table D-1 **Population in Ontario** (Thousands)
In Total and by Sex, for Census Years 1951-1966* and Projections to 1991**

	1951	1956	1961	1966	1971	1976	1981	1986	1991
Total	4,598	5,405	6,236	6,961	7,550	8,121	8,767	9,462	10,147
Male	2,314	2,722	3,135	3,479	3,763	4,039	4,354	4,695	5,032
Female	2,283	2,683	3,102	3,482	3,787	4,083	4,413	4,767	5,116

* Statistics Canada, Census of Canada, 1951-1966.

** Preliminary Population Projections, Ontario, 1971-1991, Economic Analysis Branch, Economic and Statistical Services Division, Department of Treasury and Economics. Projected figures are based on assumption 'B'—M50: total fertility rate will decline from 2,787 in 1966 to 2,156 in 1971 where it will remain stable until 1991, and the annual rate of net migration will be 50,000.

Chart D-1

Population in Ontario
In Total and by Sex, for Census Years 1951-1966

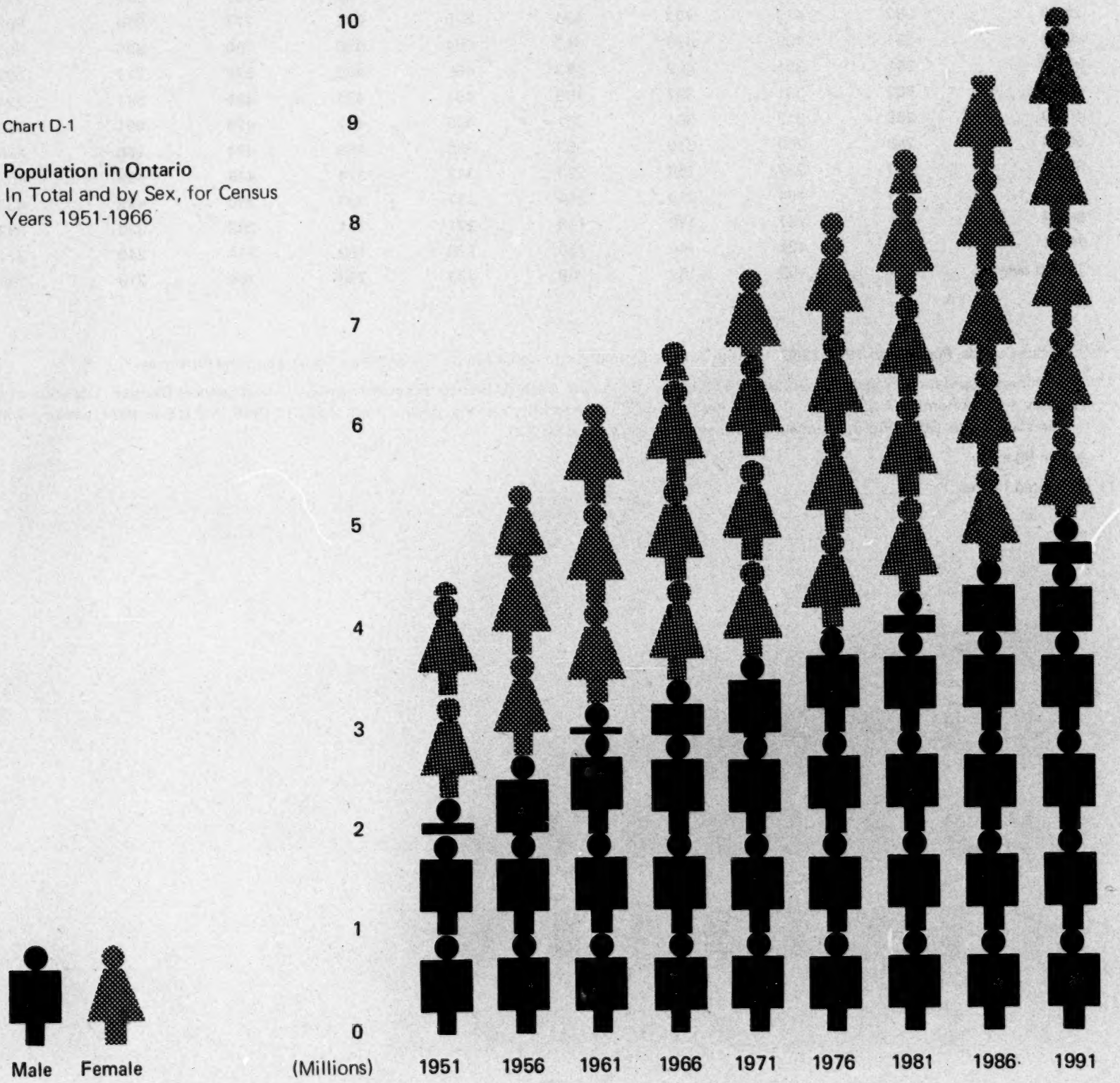


Table D-2 **Population in Ontario** (Thousands)
In Total, by Five-Year Age Segments for Census Years 1951-1966* and Projections to 1991**

	1951†	1956††	1961†	1966††	1971	1976	1981	1986	1991
Total	**4,598**	**5,405**	**6,236**	**6,961**	**7,550**	**8,121**	**8,767**	**9,462**	**10,147**
0- 4	515	629	740	746	629	635	739	820	846
5- 9	399	564	675	770	764	647	654	758	838
10-14	325	426	593	688	786	780	664	670	773
15-19	316	347	437	599	706	803	797	681	688
20-24	352	365	387	485	632	738	835	829	714
25-29	387	417	423	434	525	672	777	874	868
30-34	351	439	460	447	464	555	700	805	902
35-39	341	391	469	473	465	482	572	717	822
40-44	302	361	397	469	481	474	491	581	724
45-49	268	312	361	391	490	482	475	491	580
50-54	248	269	310	353	386	463	474	468	485
55-59	210	237	258	293	342	374	448	459	453
60-64	183	194	219	244	277	323	353	422	432
65-69	155	167	180	199	221	251	292	320	382
70-74	116	134	146	159	170	189	214	249	274
75 and over	129	153	182	209	233	256	284	319	368

* Statistics Canada, ***Population 1921-1966***. Revised Annual Estimates of Population by Sex and Age, Canada and the Provinces.

** "Preliminary Population Projections Ontario, 1971-1991." Economic Analysis Branch, Economic and Statistical Services Division, Department of Treasury and Economics. Assumption 'B'—M50 has been used: total fertility rate will decline from 2,787 in 1966 to 2,156 in 1971, where it will remain stable until 1991, and the annual rate of net migration will be 50,000.

† Actual figures.

†† Estimated figures.

Chart D-2

Population in Ontario
In Total, by Five-Year Age Segments
for Census Years 1951-1966 and Projections to 1991

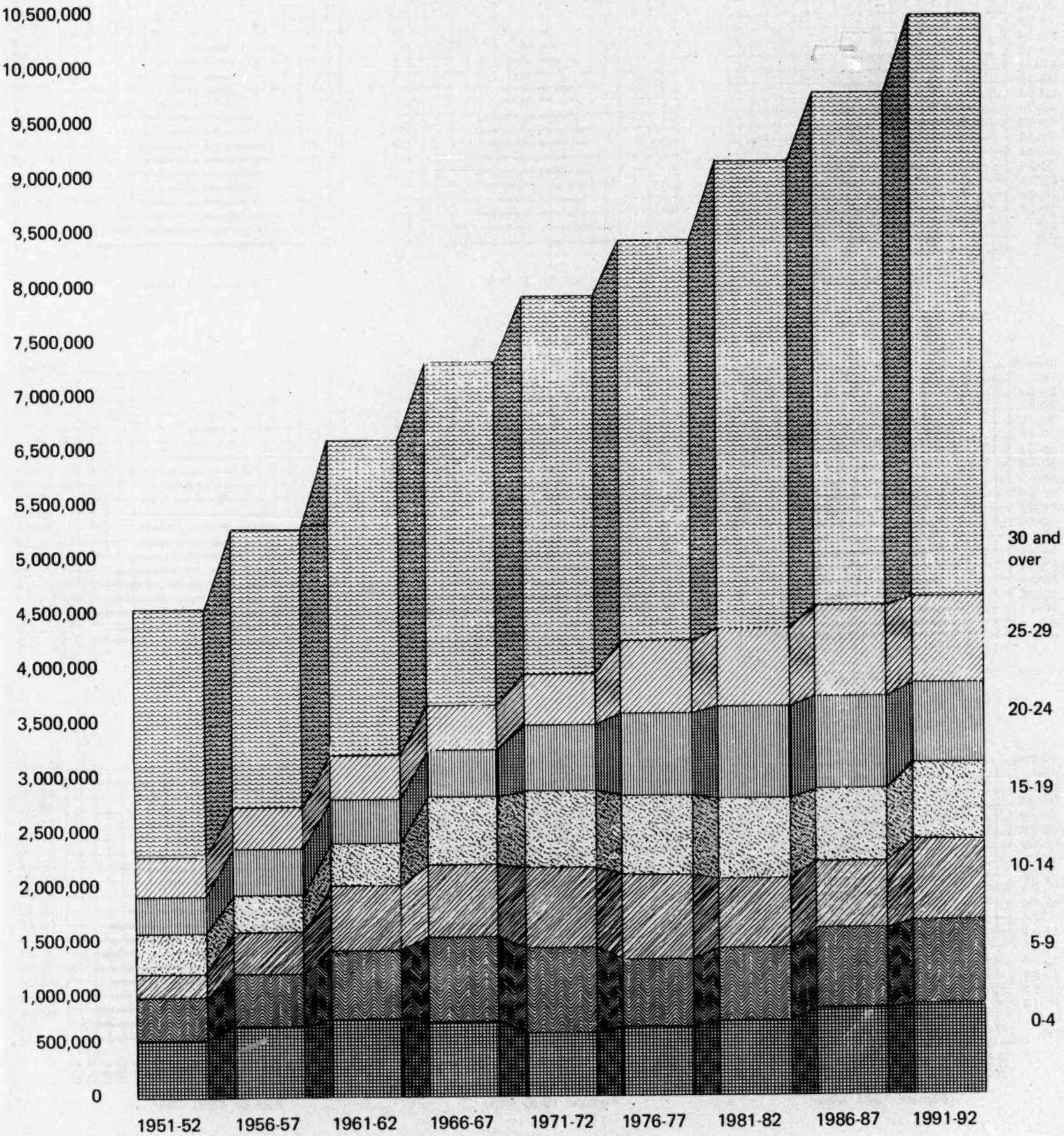
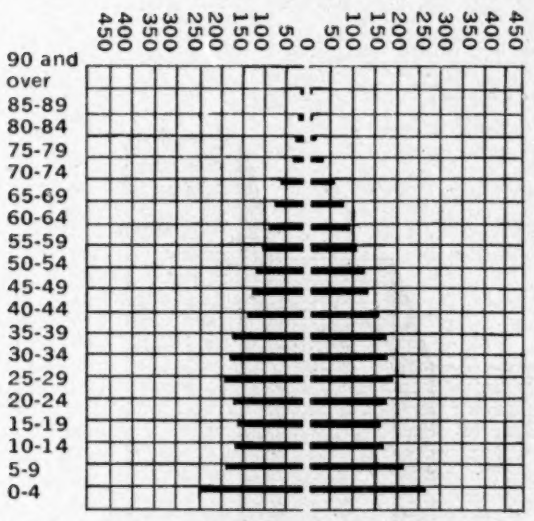
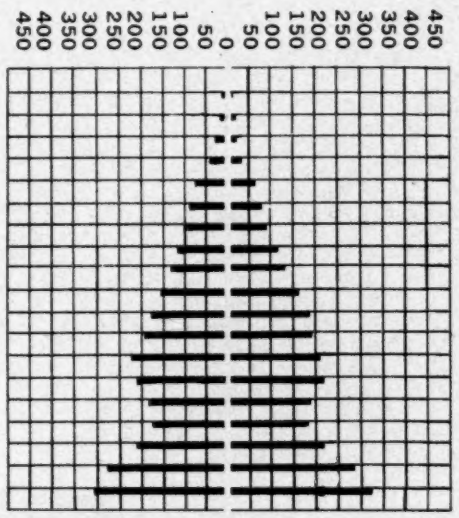


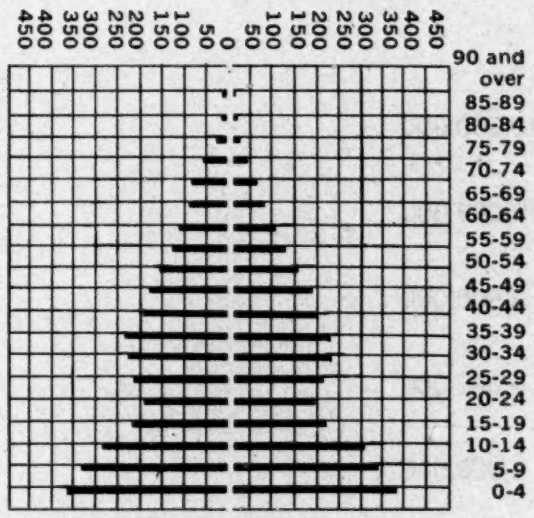
Chart D-3: **Distribution of Population in Ontario**
by Sex by Five-Year Age Segments for
Census Years 1951-1966 and Projections to 1991.
(Figures shown in Thousands)



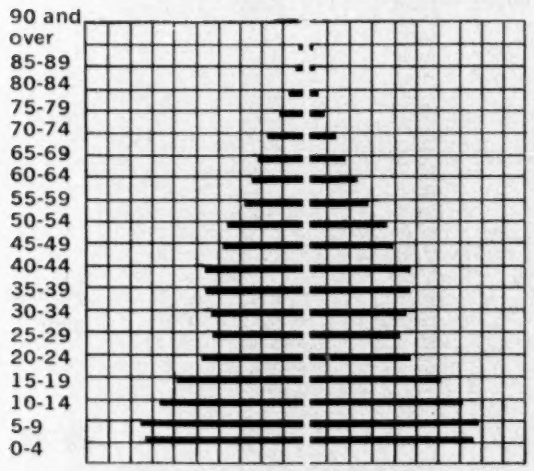
Female 1951 Male



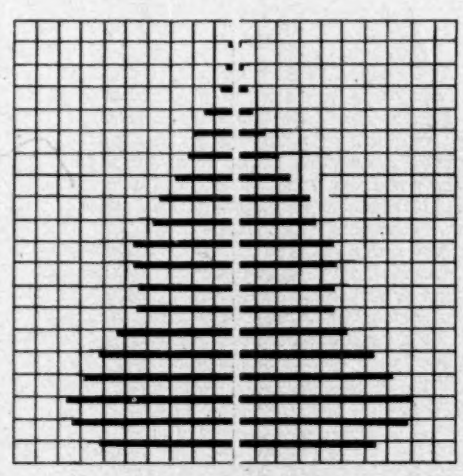
Female 1956 Male



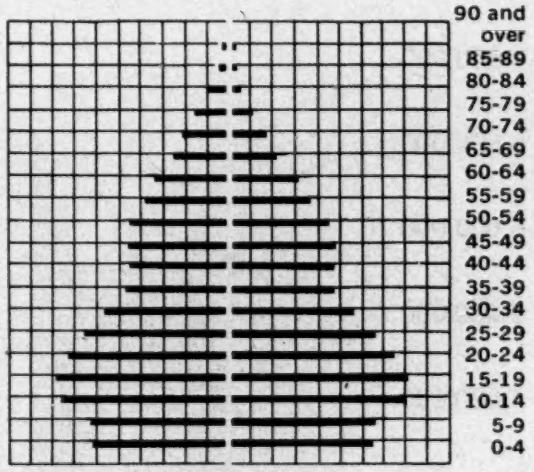
Female 1961 Male



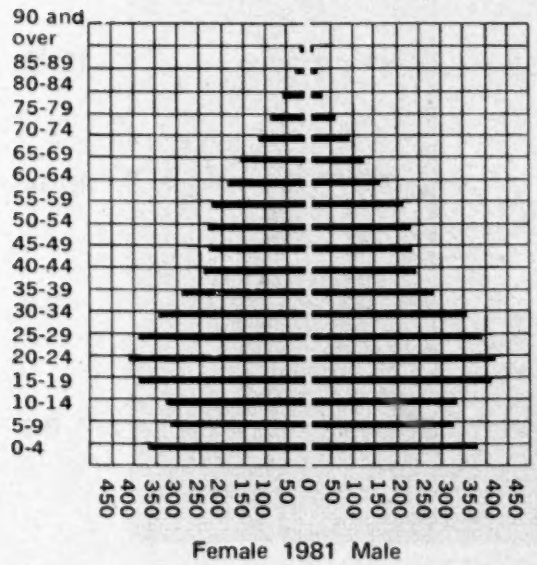
Female 1966 Male



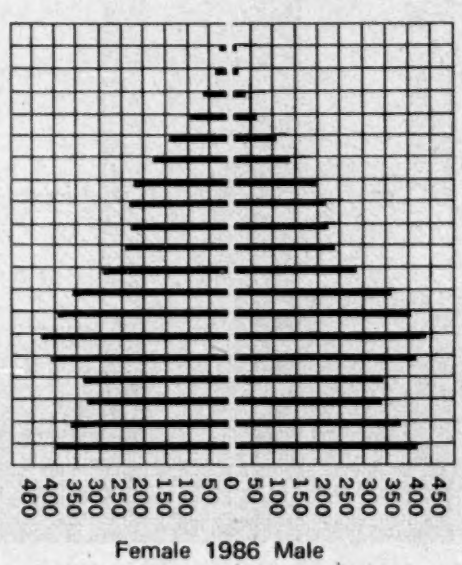
Female 1971 Male



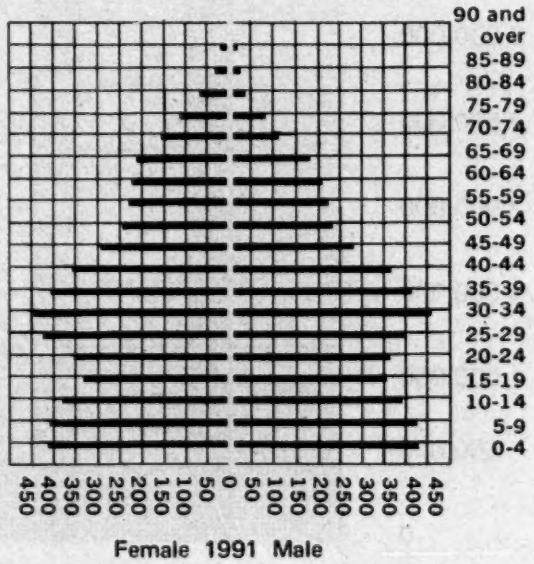
Female 1976 Male



Female 1981 Male



Female 1986 Male



Female 1991 Male

Table D-4 **Population in Ontario** (Thousands)
By Single Years of Age 18-24 for Census Years 1951-1966 and Projections to 1991

	1951*	1956**	1961**	1966**	1971†	1976†	1981†	1986†	1991†
Total 18-24	481	501	549	727	898	1,060	1,188	1,146	1,030
age range									
18	64	68	82	120	135	160	170	147	139
19	65	68	80	123	129	154	168	151	136
20	67	70	78	106	129	164	177	156	141
21	69	71	77	97	124	153	171	161	146
22	70	73	76	95	124	150	172	176	151
23	72	75	77	96	127	143	168	179	156
24	74	77	79	91	130	136	162	177	161

* Estimate provided by Department of Treasury and Economics, Economic and Statistical Services Branch. Five-year age groups are smoothed by the Spragg multiplier technique.

** Statistics Canada, Census of Canada, 1956-1966.

† Department of Treasury and Economics, Economic and Statistical Services Branch. The assumption used is 'B' M50: total fertility rate will decline from 2,787 in 1966 to 2,156 in 1971 where it will remain stable till 1991, and the annual rate of net migration will be 50,000. Mortality rate of declination for this age group is 0-4 per cent.

Chart D-4

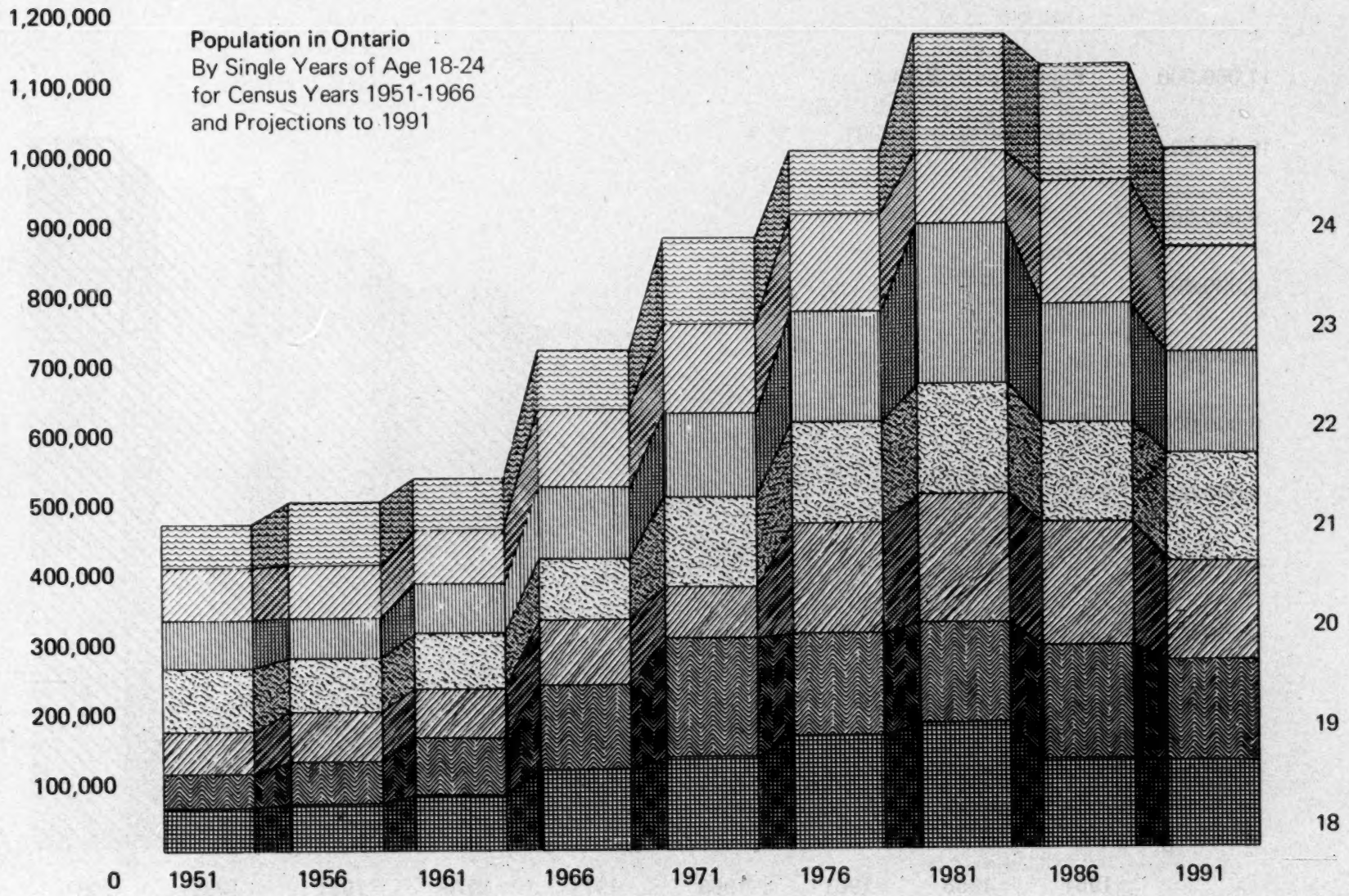


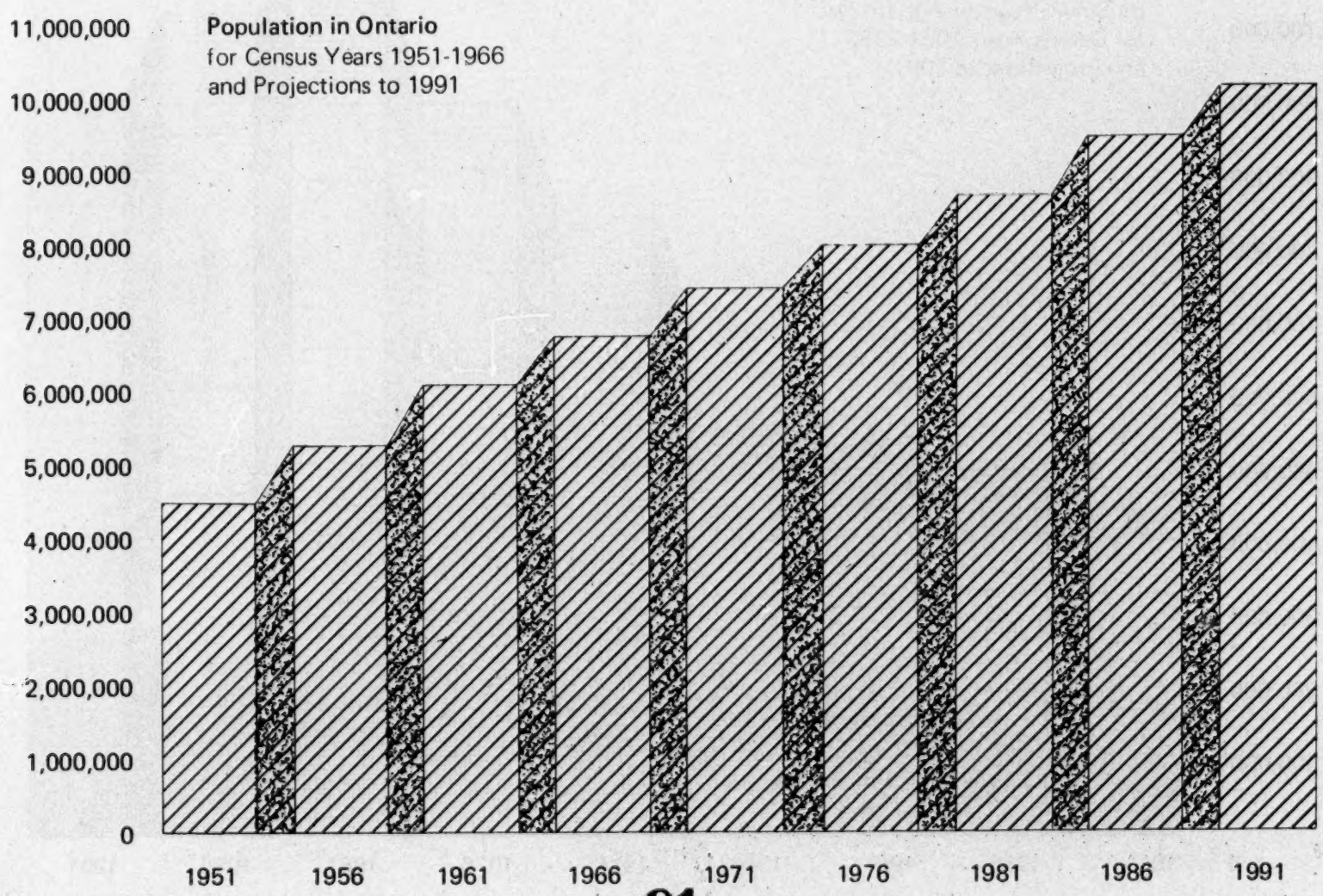
Table D-5 **Population in Ontario** (Thousands)
By Regions for Census Years 1951-1966* and Projections to 1991**

	1951	1956	1961	1966	1971	1976	1981	1986	1991
Eastern Ontario	592	676	783	851	918	985	1,061	1,141	1,219
Lake Ontario	272	305	335	351	367	384	406	428	450
Central Ontario	1,363	1,700	2,085	2,502	2,833	3,151	3,500	3,876	4,260
Niagara	576	682	762	840	902	960	1,026	1,095	1,161
Lake Erie	319	361	405	438	470	501	536	573	609
Lake St. Clair	371	422	450	486	524	564	610	660	709
Mid-Western	295	331	373	426	457	488	523	561	598
Georgian Bay	273	299	319	328	334	341	352	363	372
Northeastern Ontario	370	433	506	516	544	572	605	640	671
Lakehead North-western Ontario	167	196	217	223	233	242	253	264	272
Total Ontario	**4,598**	**5,405**	**6,236**	**6,961**	**7,582**	**8,188**	**8,872**	**9,602**	**10,321**

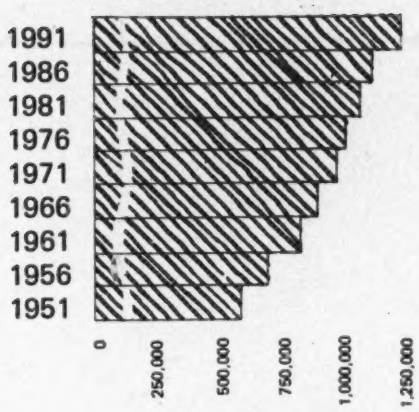
* Statistics Canada, Census of Canada, 1951-1961.

**"Ontario: Population Projections for Counties and Districts 1966-2001", Economic Analysis Branch, Economic and Statistical Services Division, Department of Treasury and Economics. Projected figures are based on assumption 'B' medium: total fertility rate will decline from 2,787 in 1966 to 2,156 in 1971 and remain constant till 2001. The decline during the period 1966-1971 amounts to 5.0 per cent per annum. Annual level of net migration into the province is 50,000. A continued overall decline in mortality rates will occur.

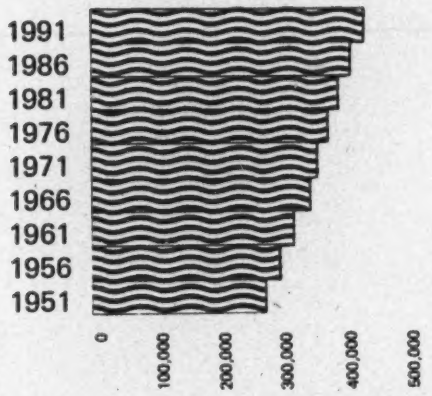
Chart D-5



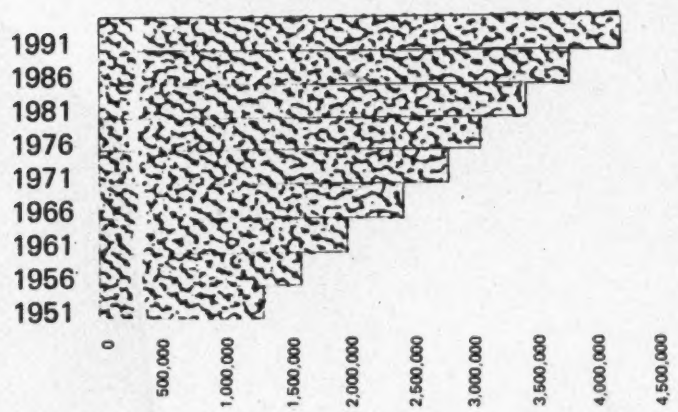
Eastern Ontario



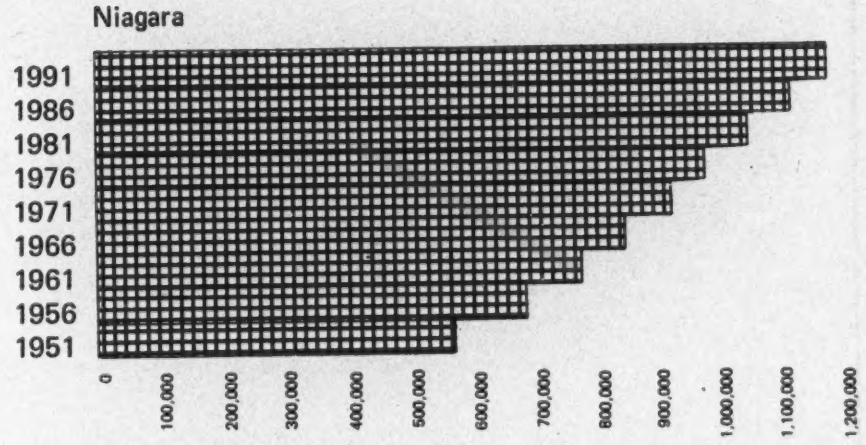
Lake Ontario



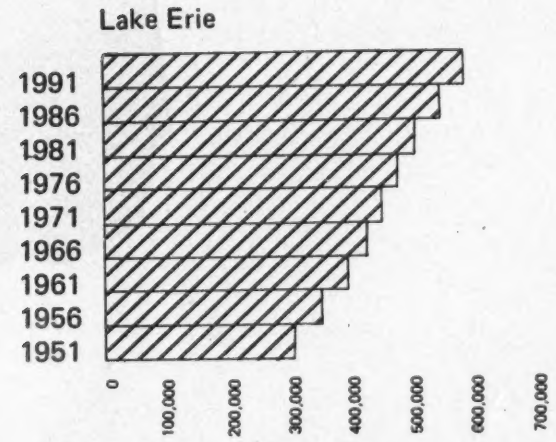
Central Ontario



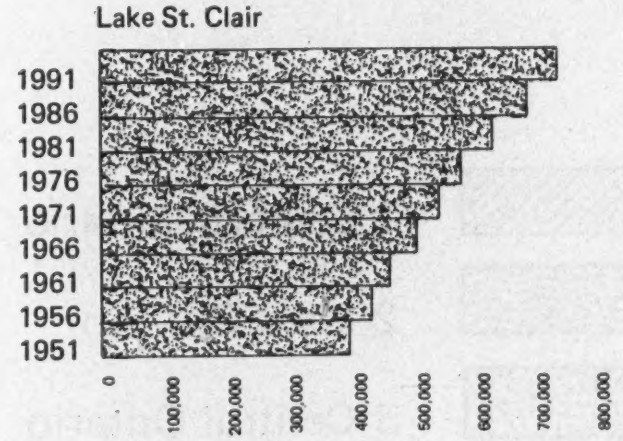
Niagara



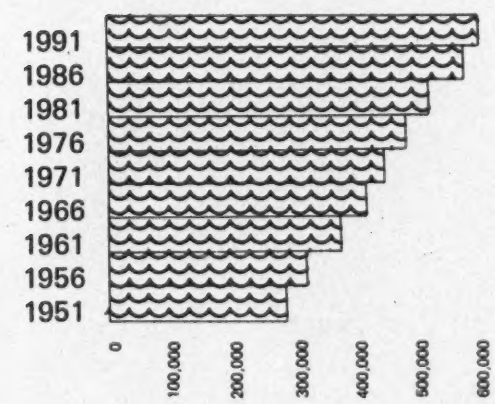
Lake Erie



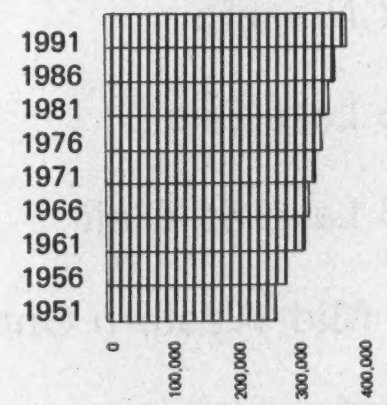
Lake St. Clair



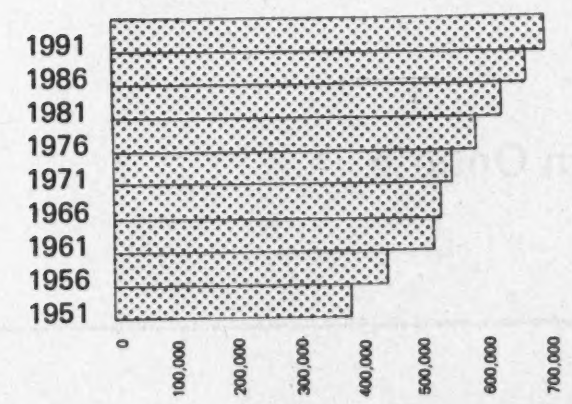
Mid-Western Ontario



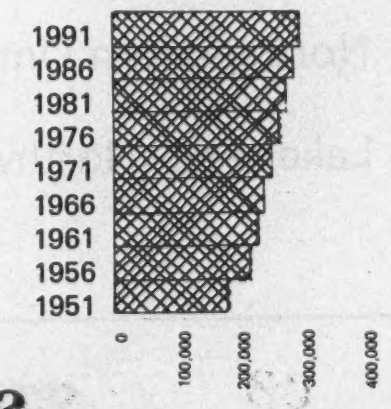
Georgian Bay



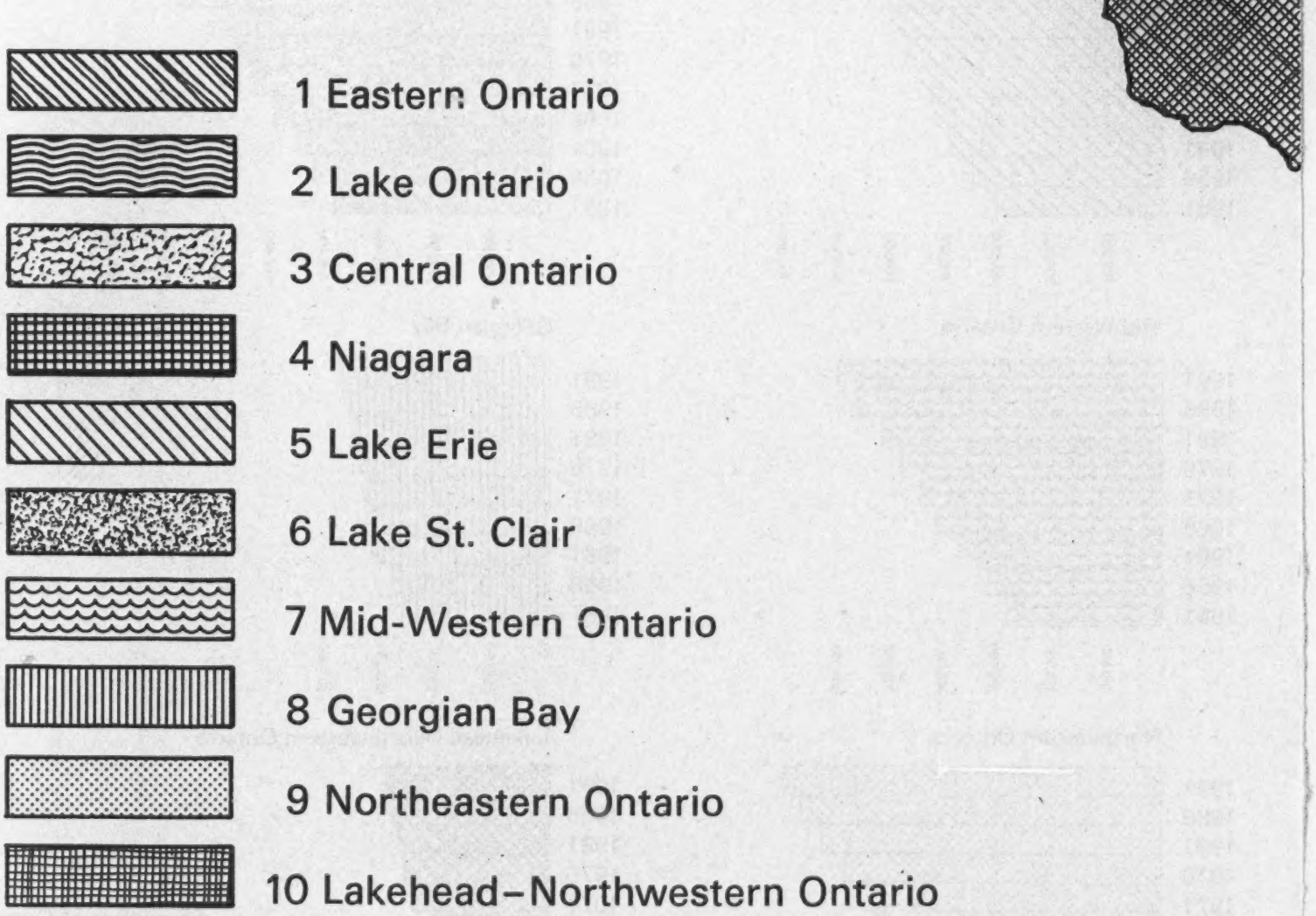
Northeastern Ontario



Lakehead | Northwestern Ontario



Population in Ontario
By Regions for
Census Years 1951-1966 and
Projections to 1991



1 Eastern Ontario

2 Lake Ontario

3 Central Ontario

4 Niagara

5 Lake Erie

6 Lake St. Clair

7 Mid-Western Ontario

8 Georgian Bay

9 Northeastern Ontario

10 Lakehead–Northwestern Ontario

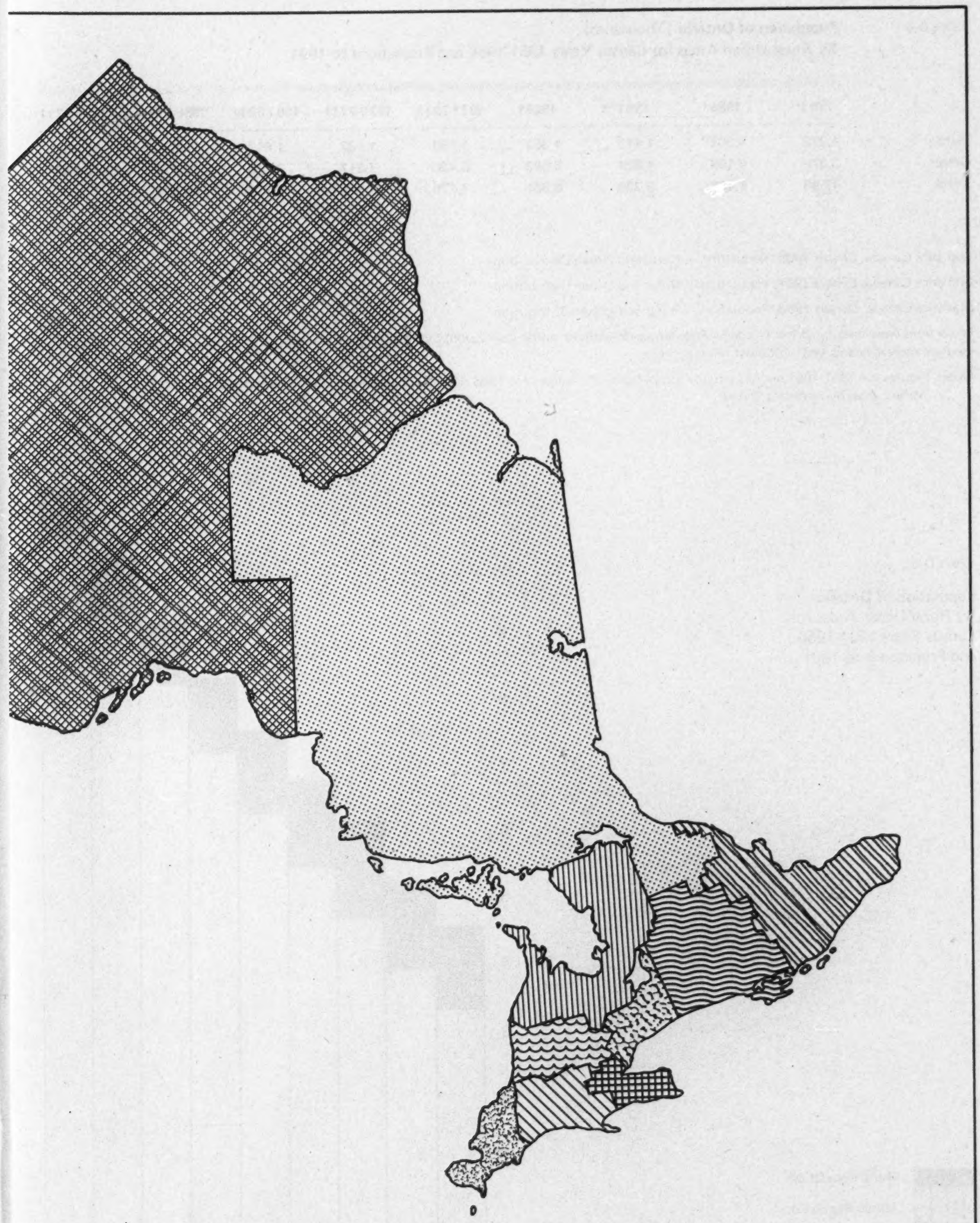


Table D-6 **Population of Ontario** (Thousands)
By Rural-Urban Areas for Census Years 1951-1966 and Projections to 1991

	1951*	1956*	1961**	1966†	1971-72††	1976-77††	1981-82††	1986-87††	1991-92††
Rural	1,222	1,302	1,413	1,367	1,250	1,132	1,017	899	797
Urban	3,376	4,103	4,824	5,593	6,420	7,317	8,316	9,432	10,587
Total	4,598	5,405	6,236	6,961	7,670	8,449	9,333	10,331	11,384

* Statistics Canada, ***Census 1956,*** Population – Rural and Urban Distribution.

** Statistics Canada, ***Census 1961,*** Population – Rural and Urban Distribution.

† Statistics Canada, ***Census 1966,*** Population – Rural and Urban Distribution.

†† Projections were calculated from Canada, ***Population Projections to the year 2,000,*** Systems Research Group, 1970 based on medium fertility, medium mortality and 1961-1966 net migration rate.

Note: Figures for 1951-1961 are not strictly comparable with figures for 1966 due to a change in the definitions of "urban" and "rural" areas by Statistics Canada.

Chart D-6

Population of Ontario
By Rural-Urban Areas for Census Years 1951-1966 and Projections to 1991

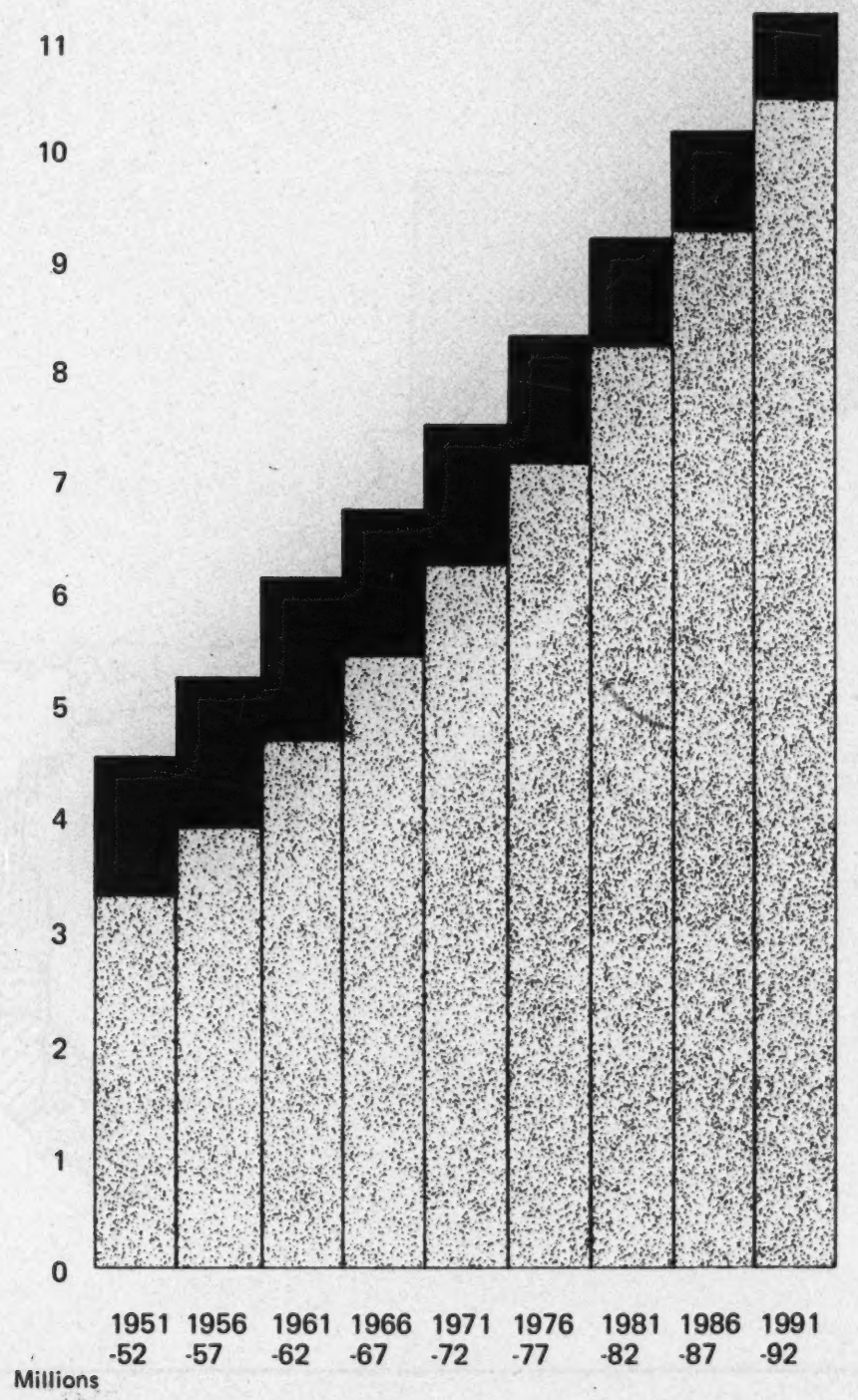


Table D-7 **Labour Force in Ontario** (Thousands)
In Total and by Sex, for Census Years 1951-1966 and Projections to 1991

	1951*	1956*	1961*	1966**	1971**	1976**	1981**	1986**	1991**
Total	1,870	2,116	2,391	2,719	3,016	3,354	3,689	3,971	4,240
Male	1,414	1,570	1,711	1,869	2,033	2,241	2,459	2,644	2,808
Female	456	546	680	850	984	1,113	1,230	1,327	1,432

* Statistics Canada, Labour Force Survey.

** Ontario Labour Force Projections 1968-1991, Tables 2 and 7, Economic Planning Branch, Policy Planning Division, Department of Treasury and Economics. Projected figures are based on a population projection which envisages a declining death rate in all age groups except the group aged 5-24, for which the death rate is assumed to remain constant. Fertility rates will be at current levels after 1967, and net immigration to Ontario will be 30,000 persons per annum.

Chart D-7

4 **Labour Force in Ontario**
In Total and by Sex, for
Census Years 1951-1966
and Projections to 1991

Table D-8 **Labour Force in Ontario** (Thousands)
As a Percentage of the Population of Ontario, for Census Years 1951-1966 and Projections to 1991

	1951	1956	1961	1966	1971	1976	1981	1986	1991
Population*	4,598	5,405	6,236	6,961	7,550	8,121	8,767	9,462	10,147
Labour Force **	1,870	2,116	2,391	2,719	3,016	3,354	3,689	3,971	4,240
Labour Force as a Percentage of Population	41%	39%	38%	39%	40%	41%	42%	42%	42%

* Figures are taken from Table D-1.

** Figures are taken from Table D-7.

Chart D-8

Labour Force in Ontario
As a Percentage of the Population of Ontario, for Census Years 1951-1966 and Projections to 1991

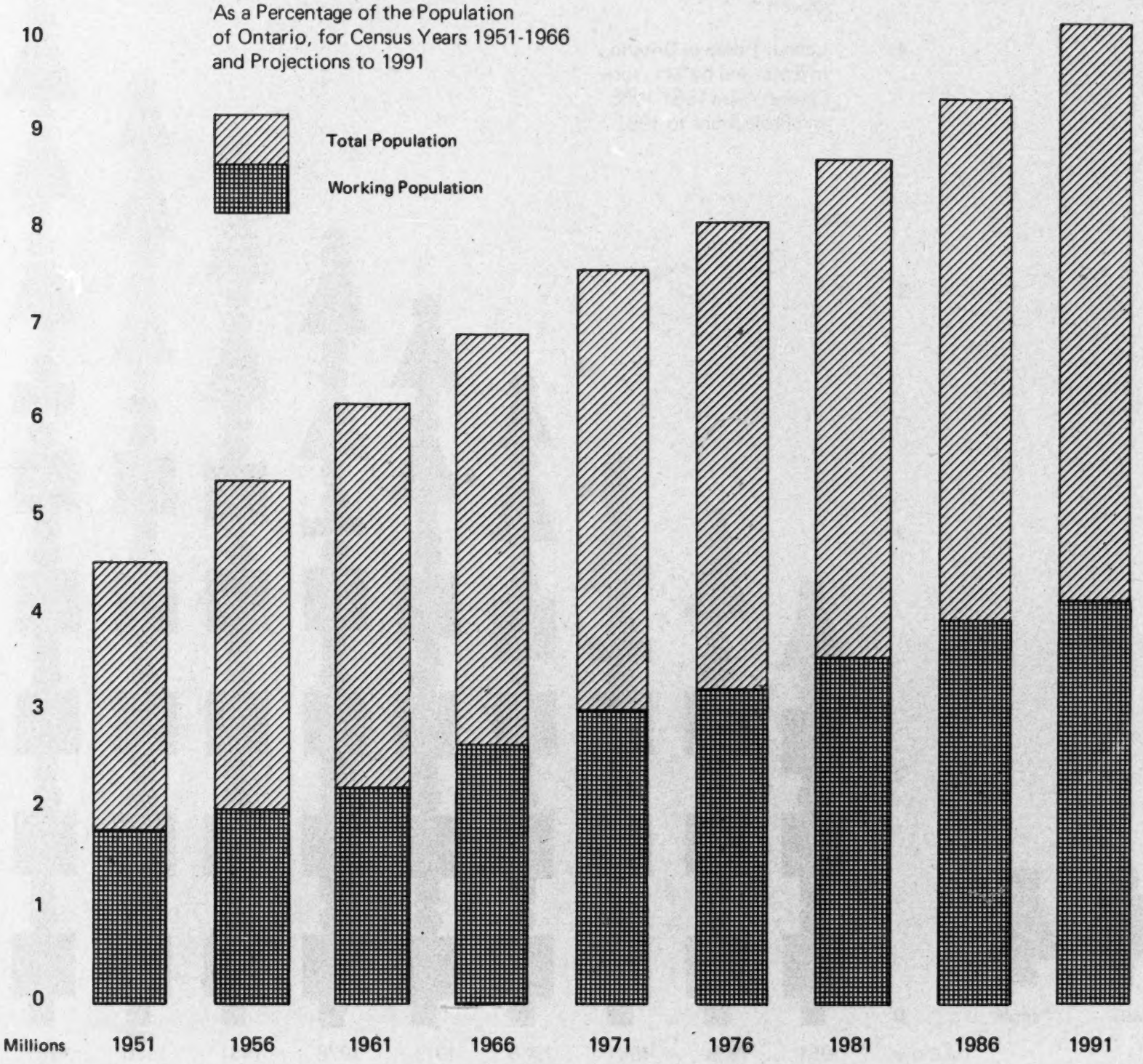


Table D-9

Labour Force in Ontario
By Sector, for Census Years 1951 and 1961*

	1951**		1961†	
	Labour Force (Thousands)	Per cent	Labour Force (Thousands)	Per cent
Primary	257	14	232	10
Secondary	743	39	797	33
Services:				
Public	117	6	181	8
Private	750	40	1,131	47
Unspecified	18	1	52	2
Total	**1,885**	**100**	**2,393**	**100**

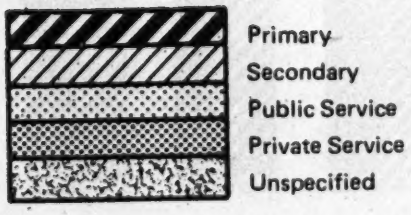
* Data not available for intercensal years and not available projected to 1991.

** Statistics Canada, ***Census of Canada,*** and Volume IV – Labour Force.

† Statistics Canada, ***Census of Canada,*** Catalogue 94-518, Labour Force.

Chart D-9

Labour Force in Ontario
By Sector, for Census Years 1951 and 1961



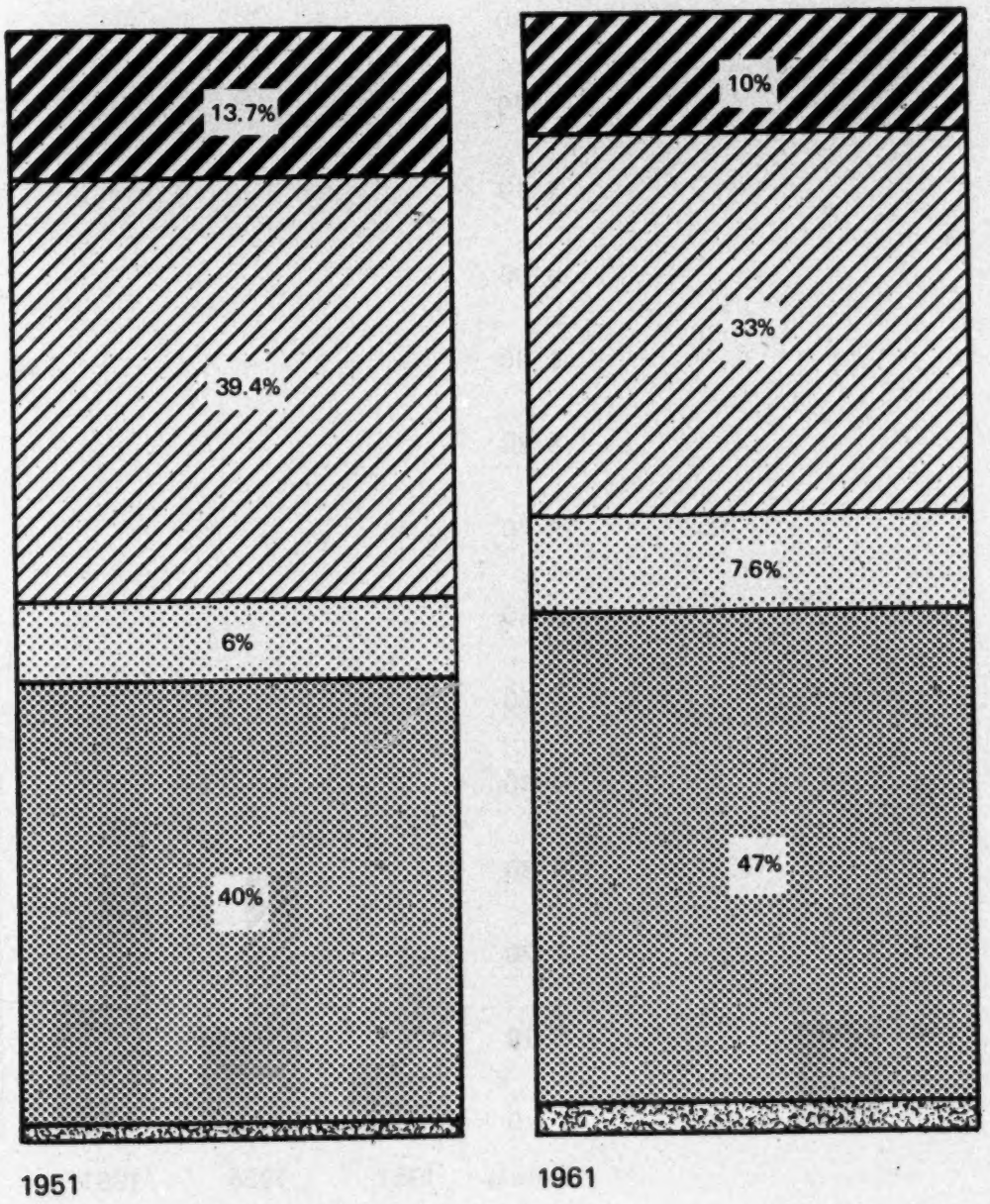


Table D-10 **Gross National and Provincial Product* ****
For Census Years 1951-1971 and Projections to 1981

	1951	1956	1961	1966	1971	1976	1981
Canada	21,060	31,374	39,080	61,421	92,015	118,502	152,687
Ontario	8,419	12,540	15,179	24,209	37,266	48,384	62,968
Ontario as a percentage of Canada	39.98	39.68	38.84	39.53	40.50	40.83	41.24

* Department of Treasury and Economics, ***Ontario Economic Review***, Vol. 9, No. 5, September/October 1971.
Statistics Canada, ***National Income and Expenditure Accounts,*** Fourth Quarter and Preliminary Annual 1970.
1970-81 growth rate assumed at 5.2 per cent per annum for national totals.

** Values are expressed in current dollars for 1951-1971 and in constant 1971 dollars for 1976 and 1981.

Chart D-10

Gross National Product
For Canada and Ontario
for Census Years
1951-1971 and
Projections to 1981

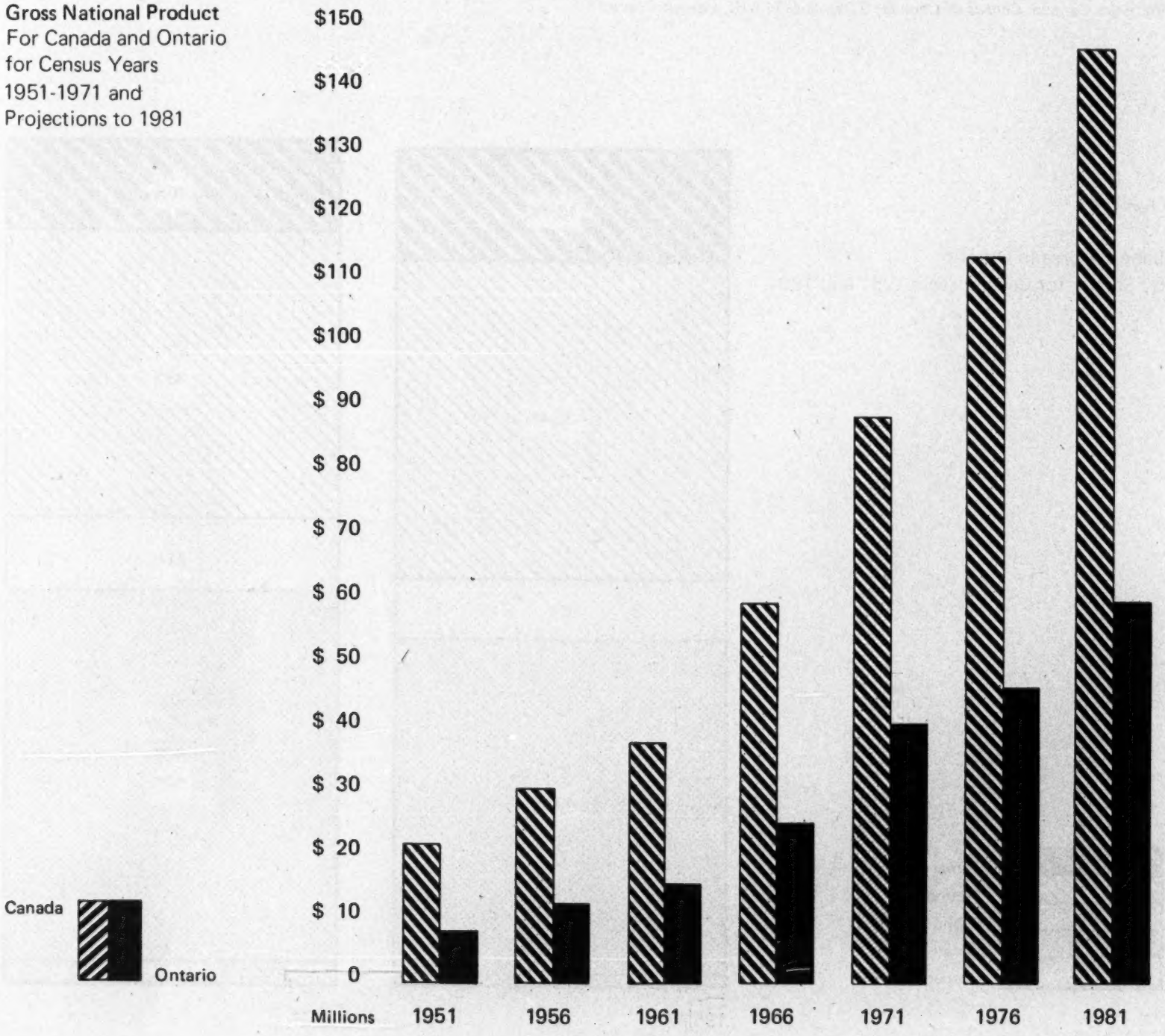


Table D-11 **Enrolment in Educational Institutions in Ontario**

	1951-52	1956-57	1961-62	1966-67	1971-72	1976-77	1981-82	1986-87	1991-92
Universities*									
Undergraduate	21,268	21,263	27,852	55,441	108,260	169,130	206,050	217,000	209,975
Graduate	1,793	1,606	3,733	7,410	14,770	24,660	31,000	33,000	33,000
Total	**23,061**	**22,869**	**31,585**	**62,851**	**123,030**	**193,790**	**237,050**	**250,000**	**242,975**
CAATs**									
Full-Time Enrolment	151	1,020	2,519	7,255	37,745	65,165	80,809	82,266	87,878
Other Post-Secondary†	3,209	5,524	10,026	20,063	21,692	N/A	N/A	N/A	N/A
Public, Elementary and Secondary‡									
Elementary	641,400	893,600	1,130,500	1,324,000	1,057,300	947,600	896,500	N/A	N/A
Secondary	140,800	195,300	313,200	426,600	600,800	683,700	622,100	N/A	N/A
Total	**782,200**	**1,088,900**	**1,443,700**	**1,750,600**	**1,658,100**	**1,631,300**	**1,518,600**	**N/A**	**N/A**

*Full-time enrolment: in all universities for census years 1951 and 1956; in all provincially assisted universities for census years 1961 and 1966; and projections from 1971 to 1991 (enrolment projections were calculated for 1980, 1985 and 1990 are inserted under 1981, 1986 and 1991).
N.B. It should be noted that these projections do ***not*** take into account the significant decline in enrolments in 1971 which may be either indicative of a long-term trend or only temporary in nature.

Sources:
1951 and 1956
Dominion Bureau of Statistics, Education Division, ***Preliminary Statistics of Education 1951*** and ***1956***

1961 – 1991
J. Holland, M. Skolnik, S. Quazi and F. Siddiqui "Manpower Forecasting and Educational Policy", a report prepared for the Commission on Post-Secondary Education in Ontario, 1971.

**Full-time enrolment in colleges of applied arts and technology (and/or similar antecedent institutions such as Ontario Vocational Centres and Ontario Institutes of Technology) for census years 1951-1966 and projections to 1991.
N.B. See * above.

Sources:
1951 and 1956
Dominion Bureau of Statistics, Education Division, **Preliminary Statistics of Education 1951** and ***1956.***

1961 and 1966
Ontario Department of Treasury and Economics

1971 to 1991
M. Holland et al. op cit.

†Full-time enrolment in other post-secondary institutions from 1951 to 1971 (Enrolments in schools of nursing are not available for 1951, 1956 and 1961). "Other Post-Secondary" includes such institutions as the Ontario College of Art, Ryerson Polytechnical Institute, provincial teachers' colleges and diploma schools of nursing.

Sources:
1951 and 1956
Dominion Bureau of Statistics, Education Division, ***Preliminary Statistics of Education, 1951*** and ***1956.***

‡Enrolment in public elementary and secondary schools for census years 1951-1966 and projections to 1981. Elementary school enrolments comprise all grades from kindergarten to Grade 8 inclusive. Secondary school enrolments comprise Grades 9 to 13 inclusive.

Sources:
1951-1966
Provided by Dr. Zsigmond, Education Division, Estimates and Analysis Branch, Statistics Canada.

1971-1981
Public elementary school enrolments: compiled from ***Ontario Preschool and Elementary School Enrolment Projections to 1981-82, Part I (1968 Projection)***, C. Watson and S. Quazi (Toronto, the Ontario Institute for Studies in Education, 1968).

Public secondary school enrolments: ***Ontario Secondary School Enrollment Projections to 1981-82 (1969 Projection)***, C. Watson, S. Quazi and A. Kleist (Toronto, The Ontario Institute for Studies in Education, 1970).

N/A Not Available.

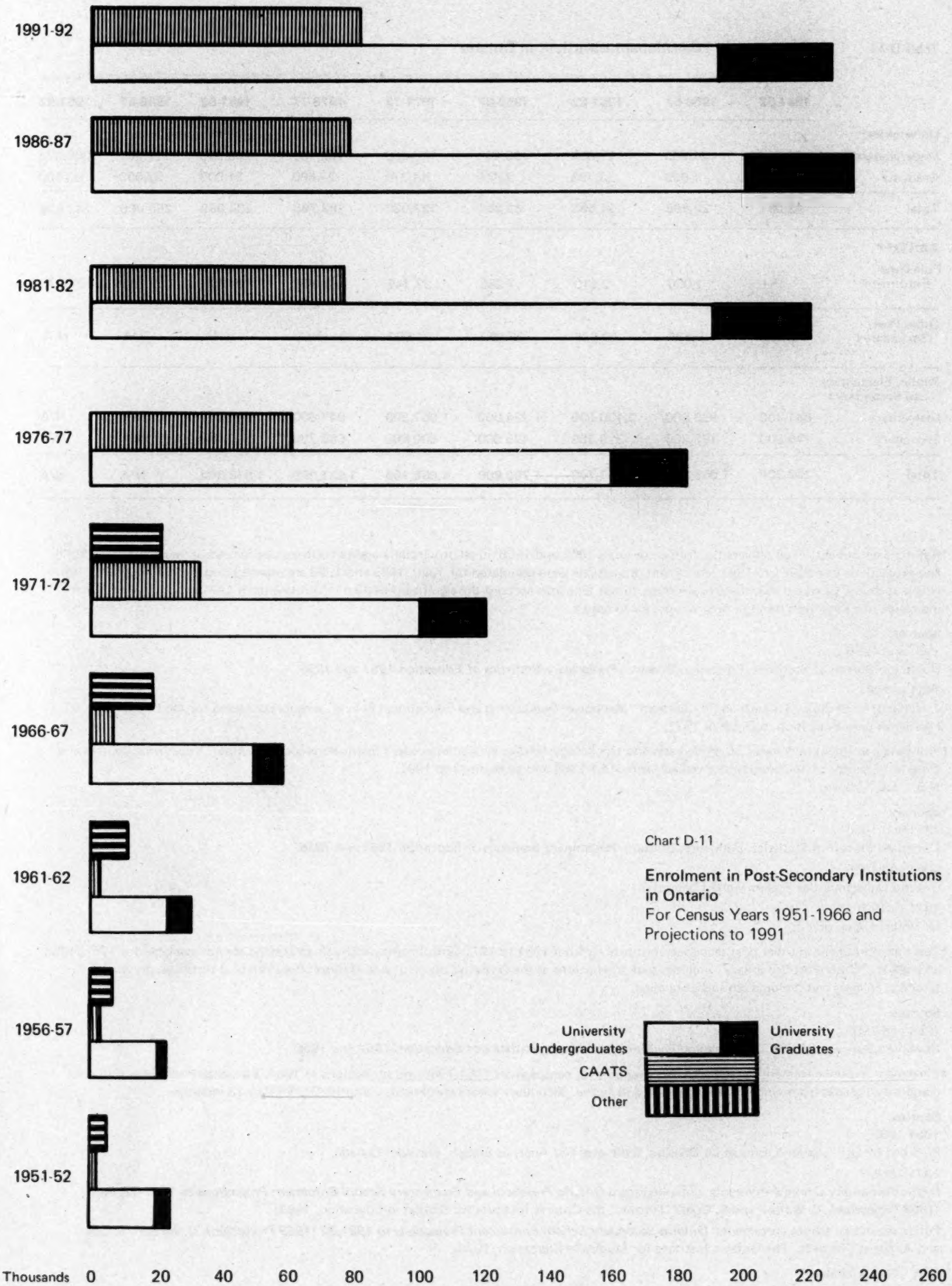


Chart D-11

Enrolment in Post-Secondary Institutions in Ontario
For Census Years 1951-1966 and Projections to 1991

Chart D-11a

Enrolment in Public, Elementary and Secondary Schools in Ontario
For Census Years 1951-1966 and Projections to 1981

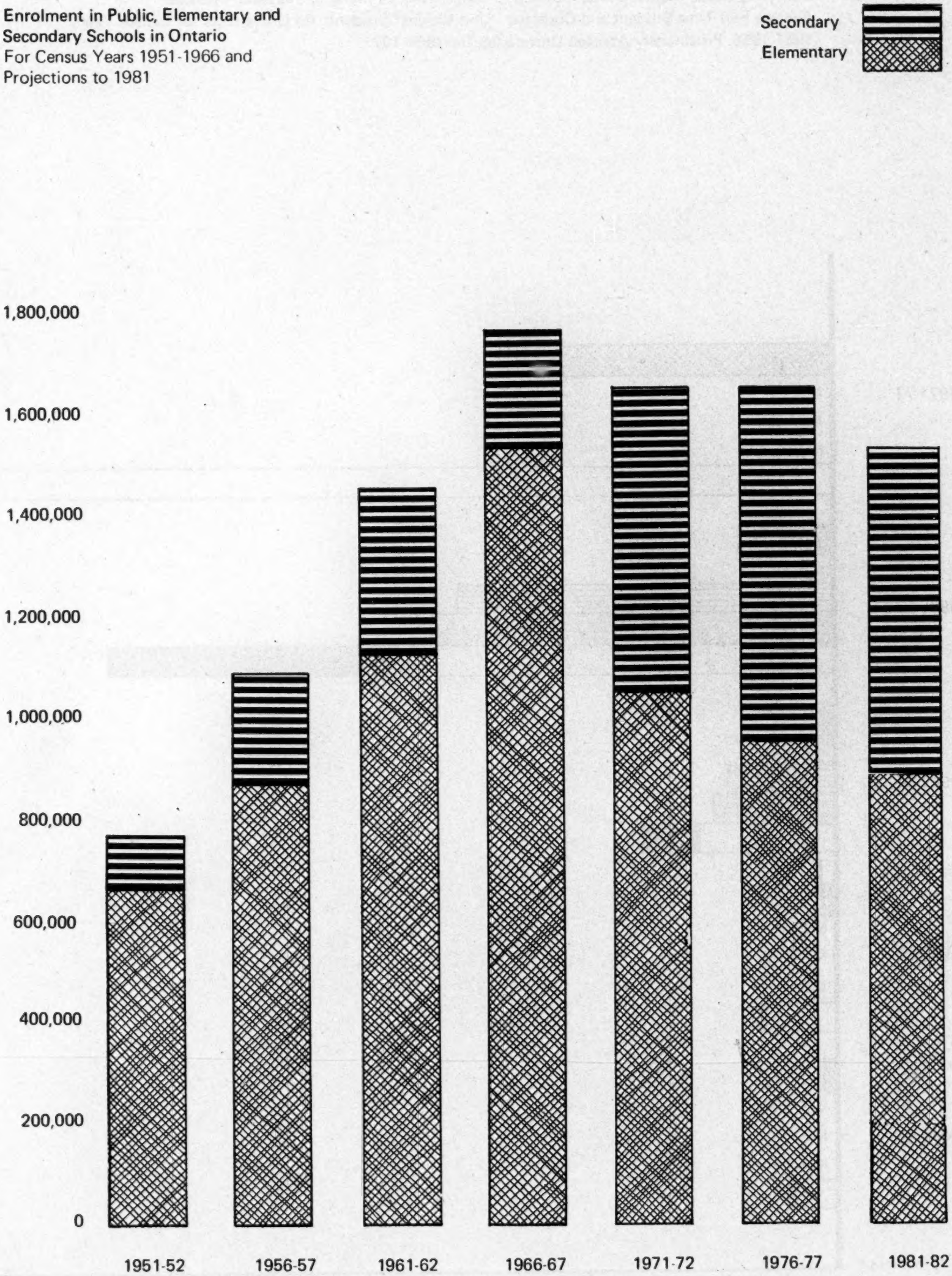
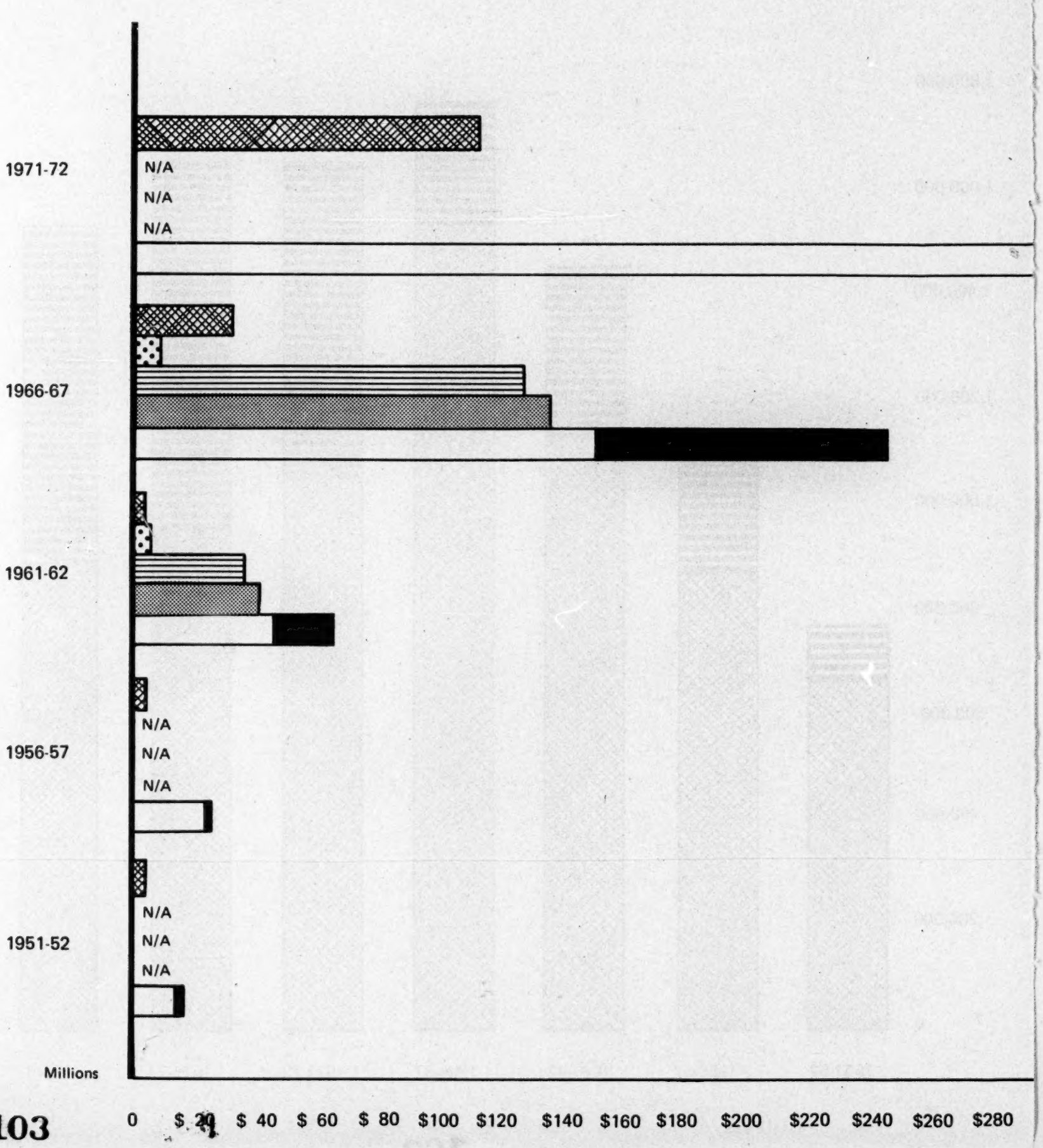


Table D-12

Financial Data – Universities in Ontario

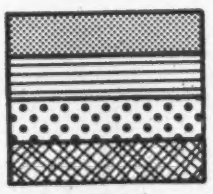
Operating Costs, Capital Costs, Funding to Universities, Funding to Students, Costs per Average Full-Time Student and Costs per "Unit Weight" Student: All Universities for Census Years 1951-1956, Provincially Assisted Universities for 1961-1971.



	1951-52† $	1956-57† $	1961-62†† $	1966-67†† $	1971-72‡ $
Capital Costs* ‡	2,990,000	1,870,000	18,462,000	93,105,000	105,000,000
Operating Costs** ‡	13,000,000	22,000,000	45,000,000	151,476,000	443,000,000
Total Capital and Operating Costs‡	**15,990,000**	**23,870,000**	**63,462,000**	**244,579,000**	**548,000,000**
Public Funding to Universities	N/A	N/A	35,162,000	127,183,000	N/A
Private Funding to Universities	N/A	N/A	4,020,000	7,326,000	N/A
Total Funding to Universities	**N/A**	**N/A**	**39,182,000**	**134,509,000**	**N/A**
Public Funding to Students†	280,000	470,000	1,186,000	30,891,000	111,738,000
Operating Costs per Average Full-Time Student‡	563	962	1,425	2,410	3,600
Operating Costs per "Unit Weight" Student‡	269	506	750	1,205	1,800

Chart D-12

All Universities and Provincially-Assisted Universities in Ontario
Operating Costs, Capital Costs, Funding to Universities, Funding to Students,
All Universities for Census Years 1951-1956,
Provincially-Assisted Universities for 1961-1971



TOTAL FUNDING TO UNIVERSITIES
TOTAL PUBLIC FUNDING TO UNIVERSITIES
TOTAL PRIVATE FUNDING TO UNIVERSITIES
TOTAL PUBLIC FUNDING TO STUDENTS

CAPITAL COSTS
OPERATING COST

* Capital consists of provincial capital grants and other capital monies collected by the universities.

** Operating costs consist of provincial and federal operating grants and other operating monies reported, not including ancillary operations.

† For all universities.

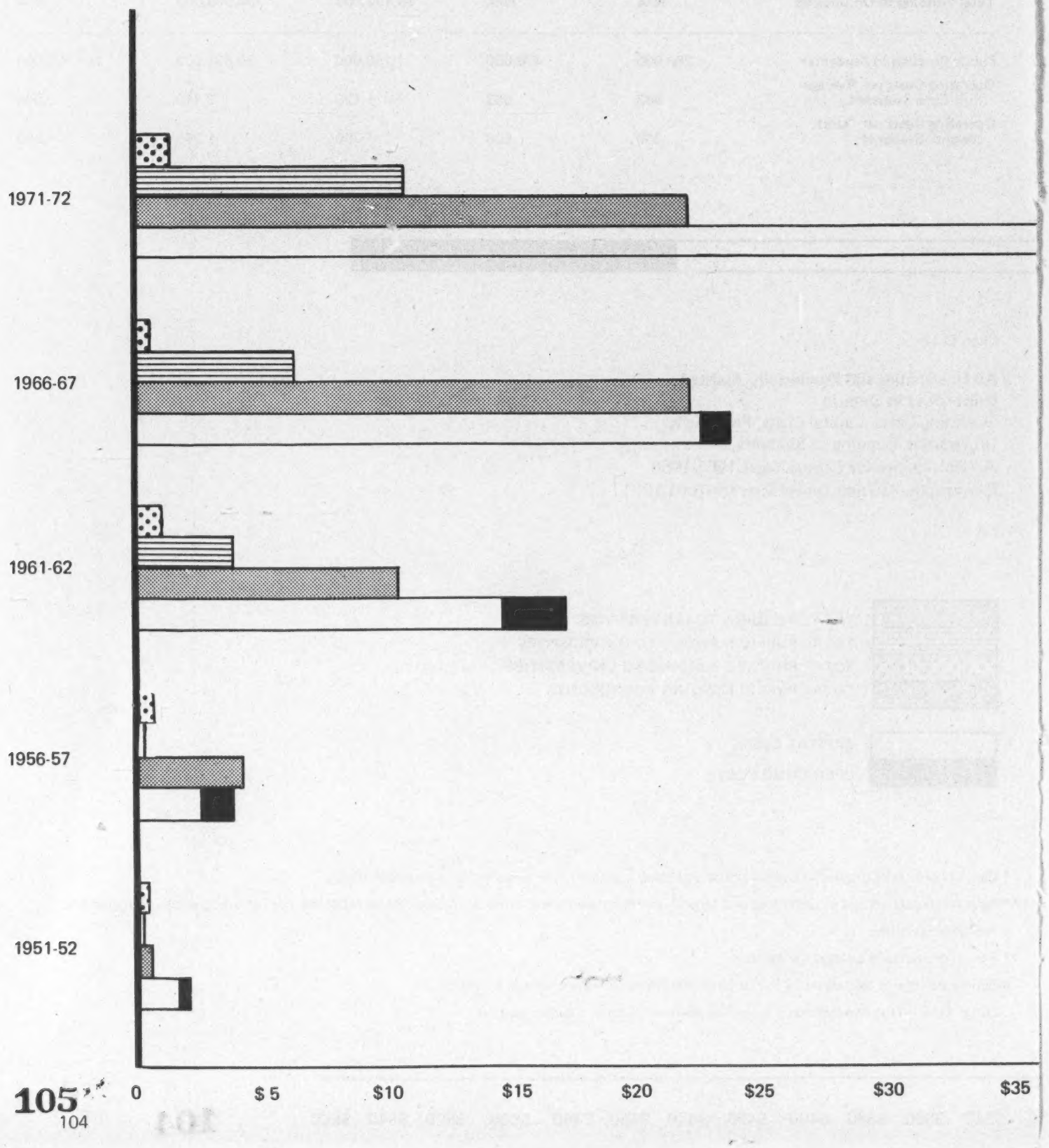
†† For all provincially assisted universities.

‡ Estimated figures, according to the Ontario University Operating Grants Formula.

Note: N/A – Not Available on a basis consistent with other figures reported.

Table D-14

Financial Data – Other Post-Secondary Institutions in Ontario
Total Operating and Total Capital Costs, Funding to Students and Institutions and Expenditures by Students, Comparison of Operating Costs for Total and Average Full-Time Students: Trends 1951-1971*



	1951-52 $	1956-57 $	1961-62 $	1966-67 $	1971-72 $
Operating Cost	1,545,000	2,493,000	14,970,000	22,721,000	50,060,000
Capital Cost ‡†	356,000	1,288,000	2,207,000	1,029,000	19,698,000
Operating and Capital Cost ‡†	**1,901,000**	**3,782,000**	**17,177,000**	**23,750,000**	**69,758,000**
Public Funding to Institutions ‡††	261,000	4,220,000**	10,236,000	22,444,000	23,142,000
Public Funding to Students ‡	53,000	69,000	4,060,000	6,390,000	11,065,000
Expenditures by Students ‡	199,000	440,000	1,035,000	506,000	1,489,000
Operating Cost Per Average Full-Time Student ‡	481	451	1,493	1,132	2,309

* Other post-secondary institutions include Ontario College of Art, Ryerson, teachers' colleges, and schools of nursing (RN program only).

** In 1956-57 total public funding to institutions appears to be greater than total operating and capital costs.

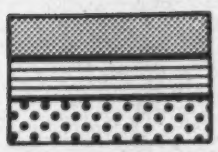
† Figures for schools of nursing *not* available for 1951.

†† Figures for schools of nursing *not* available for 1951 and 1956.

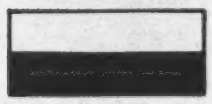
‡ Estimated figures.

Chart D-14

Other Post-Secondary Institutions in Ontario
Total Operating and Total Capital Costs; Funding to Students and Institutions and Expenditures by Students; Comparison of Operating Costs for Total and Average Full-Time Students: Trends 1951-71



TOTAL PUBLIC FUNDING TO INSTITUTIONS
TOTAL PUBLIC FUNDING TO STUDENTS
TOTAL EXPENDITURES BY STUDENTS



OPERATING COST
CAPITAL COST

$40 $45 $50 $55 $60 $65 $70

Table D-13 **Financial Data – Colleges of Applied Arts and Technology in Ontario**
Trends in CAATs Operating and Capital Costs, Funding to Students and CAAT , and Expenditures by CAAT Students in Ontario and Comparison of Operating Costs for Total and Average Full-Time CAAT Students in Ontario for Census Years 1951-1971.

	1951-52 $	1956-57 $	1961-62 $	1966-67 $	1971-72 $
Capital Costs**	18,868	31,416	325,002	2,404,580	63,000,000
Operating Costs**	90,788	139,908	1,443,120	6,674,837	90,288,000
Operating and Capital Costs**	**109,656**	**171,324**	**1,768,122**	**9,079,437**	**153,288,000**
Public Funding to CAATs**	15,766	74,122	1,430,625	9,055,074	105,642,000
Public Funding to Students* **	13,375	19,175	83,444	917,492	9,526,734
Expenditures by Students**	15,457	57,440	315,528	1,342,175	6,303,505
Operating Costs per Full-Time Student**	601	137	572	920	2,392

* Public funding to students includes federal loans and provincial grants.

** Estimated figures.

Table D-15 **Comparative Analysis of Public Education Costs in Ontario**
In Total, Per Capita, and as a Percentage of Gross Provincial Product, for Census Years 1951-1966 and Projections for 1971*

	1951-52	1956-57	1961-62	1966-67	1971-72	Units
Operating and Capital Costs						
Universities	16.0	23.9	63.5	244.6	548.0	$ millions
Colleges of Applied Arts and Technology	0.1	0.2	1.8	9.1	153.3	$ millions
Other Post-Secondary Education	1.9	3.8	17.2	23.7	69.7	$ millions
Total Post-Secondary Education	18.0	27.9	82.4	277.4	771.0	$ millions
Total Public, Elementary, and Secondary	136.4	250.6	478.8	876.6	1,544.7	$ millions
Total Public Education	154.4	278.5	561.2	1,154.0	2,315.7	$ millions
Population						
Post-Secondary Education Cost Per Capita	4	5	13	40	102	$
Public Education Cost Per Capita	34	52	90	166	307	$
Gross Provincial Product						
Total Post-Secondary Education as a Percentage of GPP	0.2	0.2	0.5	1.1	2.1	Per cent
Total Public Education as a Percentage of GPP	1.8	2.2	3.7	4.8	6.2	Per cent

* Figures are taken from previous tables.

Table D-16 **Projected Enrolment and Costs* of Public Education in Ontario**

	1971-72	1976-77	1981-82	Units
Public Elementary and Secondary Education				
Total Enrolment	1,658,100	1,631,300	1,518,600	Students
Total Operating and Capital Cost (@ 1.5% p.a. increase in current dollars)	1,545	1,664	1,793	$ millions
Universities				
Enrolment	123,000	189,000	229,000	Students
Unit Operating Cost*	3,600	3,600	3,600	$
Total Operating Cost	443	680	824	$ millions
Average Annual Student Increase	–	10,600	5,400	Students
New Capital @ $7,000 per Student Place Increase	–	74	38	$ millions
Renovation and Replacement @ 3% of Stock @ $7,000	–	40	48	$ millions
Total Capital Cost	105	114	86	$ millions
Total Operating and Capital Costs	548	794	910	$ millions
Colleges of Applied Arts and Technology				
Enrolment	37,700	65,200	80,800	Students
Cost per Student (in 1971 Dollars)	2,400	2,200	2,000	$
Operating Cost	90	143	162	$ millions
Average Annual Student Increase	–	4,300	2,000	Students
New Capital @ $7,000 per Student Place Increase	–	30	14	$ millions
Renovation and Replacement @ 3% of Stock @ $7,000	–	14	17	$ millions
Total Capital Cost	63	44	31	$ millions
Total Operating and Capital Costs	153	187	193	$ millions
Other Post-Secondary Education				
Total Operating and Capital Costs	70	70	70	$ millions
Total Post-Secondary Education Operating and Capital Costs	**771**	**1,051**	**1,173**	**$ millions**
Total Public Education Costs	**2,316**	**2,715**	**2,966**	**$ millions**
Population				
Total Post-Secondary Education Cost Per Capita	102	130	133	$
Total Public Education Cost Per Capita	307	335	338	$
Gross Provincial Product				
Total Post-Secondary Education as a Percentage of GPP**	2.1	2.1	1.9	Per cent
Total Public Education as a Percentage of GPP	6.2	5.6	4.7	Per cent

* In constant 1971 dollars.

** Gross Provincial Product in 1971 dollars.

Analysis of Unit Income and Expenditure in Post-Secondary Education

APPENDIX E

As outlined in Chapter IV, "Instruments of Implementation: Financing", the Commission undertook analyses provide a basis for establishing a hypothetical normal "instructional cost" for university and college programs. For the universities, it was desired to sort out the costs of instruction from the costs of research and other services. For the colleges of applied arts and technology, it was desired to estimate "normal" unit costs that would be characteristic of the system with a viable increased scale of operation, increased class sizes, and a lower proportion of overhead costs. This work was performed with the assistance of a simple model developed in co-operation with the Commission by Systems Research Group. The operations characteristic of the model are outlined in Table E-1. The model is based upon the interconnection between the principal parameters: institutional income per student per year, the percentage of the institutional budget devoted to faculty salaries, average salary per annum for faculty members, average scheduled student contact hours per week, average class size, and average scheduled faculty contact hours per week. These parameters are, of course, all inter-related as shown in Table E-1. As well, the model, permits the determination of student/faculty ratio as a derived quantity. The first part of the analysis was performed to determine the parametric features of present patterns of operation. The results of this analysis are contained in Table E-2. The second stage of the analysis involved turning the model around to reveal the results of a series of assumptions concerning hypothetical operations corresponding to activities restricted to educational services, operating at viable scale. The assumptions involved and the results of this stage of the analysis are shown in Table E-3. Table IV-4 on page 44 reflects this analysis.

It is, of course, important to note that these analyses are by no means precise. It seems appropriate, however, to suggest that this form of analysis is likely to be more productive than more conventional cost accounting approaches which have been tried on occasion without conspicuous success. The importance of the present analyses lies in the way in which they focus on the organization of academic effort. While the formal processes indicated in data on class size and scheduled contact hours do not reflect the whole of the teaching and learning process, such statistics nevertheless provide a clear insight into unit cost structures. Unit costs are very sensitive to class sizes and teaching loads. Small class sizes are greatly preferred, but their cost must be seen and acknowledged. It is important to note that good economics and good pedagogy can both be satisfied with a range of class sizes in which the majority are quite small. For university work, for instance, if one-fifth of all classes contain 125 students, one-fifth 50, one-fifth 15, and two-fifths only five, the average class has 40 students which is greater than any of the entries in Table E-2. Average class sizes shown in the tables for college operation, and for more specialized university work, are in turn considerably smaller than this and provide for a large proportion of smaller classes.

Table E-1 **Operations Characteristic of the Systems Research Group Model**

Input Variables

General Input

- Value of a basic income unit for one year (V^t)

Base Case (Actual Data) – Specified by category (c)

- Formula weight (W_c^t)
- Student fee (F_c^t)
- Per cent of income allocated to faculty salaries (P_c^t)
- Average annual f.t.e. faculty salary (S_c^t)
- Average student contact hour load per week (SL_c^t)
- Average class size[1] (C_c^t)
  or
  Average faculty contact hour load per week (FL_c^t)

Experiments

- Percent of income allocated to faculty salaries (P'^t_c)
- Average class size (C'^t_c)
- Average faculty contact hour load per week (FL'^t_c)

Calculations and Output

Base Case (Actual Data)

$I_c^t = W_c^t \times V^t$	income per student
$FI_c^t = I_c^t \times P_c^t$	income allocated to each faculty member from each student
$SF_c^t = S_c^t / FI_c^t$	student/faculty ratio
$E_c^t = SF_c^t \times SL_c^t$	student hours per faculty member
if C_c^t is input:	$FL_c^t = E_c^t / C_c^t$
if FL_c^t is input:	$C_c^t = E_c^t / FL_c^t$

Experiments

$E'^t_c = C'^t_c \times FL'^t_c$	=	New student hours per faculty member
$SF'^t_c = E'^t_c / SL_c^t$	=	New student faculty ratio
$FI'^t_c = S_c^t / SF'^t_c$	=	New income issued to each faculty member from each student
$I'^t_c = FI'^t_c / P_c^t$	=	New income per student
$W'^t_c = I'^t_c / V^t$	=	New weight

Table E-2 **Typical Unit Income and Expenditures in Universities and Colleges**
(for Two Academic Semesters, Basic Income Unit $1,650 in 1970-71)
for Cost Allocation Implicit in Ontario Operating Grants Formula

		Enrolment Category*	Formula Weight♦	Income Per Student $	Per cent Faculty Salaries	Average Salary†† $	Average Student Contact Hours Scheduled per week‡	Average Class Size‡‡	Average Faculty Contact Hours Scheduled per week	Student Faculty Ratio
Universities	Undergraduate and First Degree	General Arts and Science	1.0	1,650.	45.	13,200.	20.0	37.	9.6	17.8
		Honours Arts, Commerce, Law etc.	1.5	2,475.	45.	16,800.	16.0	30.	8.1	15.1
		Engineering, Architecture, etc.	2.0	3,300.	40.	16,800.	25.0	23.	13.9	12.8
		Med.—Basic	5.0	8,250.	40.	22,200.	27.0	30.	6.0	6.7
		Med.—Clinic	5.0	8,250.	250.†	42,500.	27.0	8.	7.0	2.1
	Graduate	M.A., M.B.A.	2.0	3,300.	48.	22,200.	10.0	13.	10.8	14.0
		M.Sc.	2.7	4,455.	40.	22,200.	10.0	13.	9.6	12.4
		Ph.D.	4.0	6,600.	45.	22,200.	6.0	8.	5.6	7.5
Colleges of Applied Arts and Technology		Applied Arts and Business	1.4**	2,320.	48.	12,500.	26.0	18.	11.2	16.2
		Technology	1.7**	2,838.	48.	12,500.	28.0	15.	9.2	17.1
		Applied Health	2.8**	4,702.	48.	12,500.	28.0	12.	5.5	12.9

* The names of categories have been chosen as most representative ones. College of Applied Arts and Technology category does not include Ryerson Polytechnical Institute.

** Reflects average cost per student in 1970-71 which in turn reflects the small scale of operation of most colleges.

† Due to other income.

†† *Universities* Statistics Canada 81-203, Table A, p. 12. Average salaries used for universities reflect assumptions concerning different mixes of professional staff of various rank, and different uses of demonstrators and assistants in different kinds of work. For the Colleges of Applied Arts and Technology, salary figures reflect SRG printout (D. McKennitt Study) 1970-71 data.

‡ Contact includes all scheduled meetings including lectures, laboratories, tutorials, seminars and formal graduate student supervision. SRG Analysis of University of Toronto Arts and Science Calendar, 1968-69.

‡‡ Analysis of Section Sizes, Committee of Presidents of Universities of Ontario, January 1971, Table 1., p. 7; SRG Printout.

♦ Weights as published in the ***Report of the Minister of University Affairs, 1967***. (The weight for medicine was revised in 1969).

Table E-3 **Typical Unit Income and Expenditures in Universities and Colleges**
(for Two Academic Semesters, Basic Income Unit $1,650 in 1970-71)
Hypothetical Cost Allocation for Educational Services

		Enrolment Category	Adjusted Formula Weight	Income Per Student $	Per cent Faculty Salaries	Average Salary $	Average Student Contact Hours Scheduled per week	Average Class Size	Average Faculty Contact Hours Scheduled per week	Student Faculty Ratio
Universities	Undergraduate and First Degree	General Arts and Science	0.75	1,218.	45.	13,200.	20.0	37.	13.0*	24.0
		Honours Arts, Commerce, Law etc.	0.9	1,535.	45.	16,800.	16.0	30.	13.0	24.4
		Engineering, Architecture, etc.	1.5	2,249.	40.	16,800.	25.0	26.	18.0**	18.7
		Med.—Basic	2.3	3,117.	40.	22,200.	27.0	30.	16.0	17.8
		Med.—Clinic	2.7	3,586.	250.	42,500.	27.0	8.	16.0	4.7
	Graduate	M.A., M.B.A.	1.7	2,732.	48.	22,200.	10.0	13.	13.0	16.9
		M.Sc.	2.0	3,279.	40.	22,200.	10.0	13.	13.0	16.9
		Ph.D.	1.7	2,841.	45.	22,200.	6.0	8.	13.0	17.3
Colleges of Applied Arts and Technology		Applied Arts and Business	0.75	1,250.	50.	12,500.	26.0	26.	20.0†	23.0
		Technology	0.9	1,520.	50.	12,500.	28.0	23.	20.0	18.9
		Applied Health	1.3	2,190.	50.	12,500.	28.0	16.	20.0	13.1

* 13 hours contact at average 1 hour contact plus 2 hours preparation results in 39-hour work week.

** Reflects proportion of laboratory time carried by demonstrators.

† 20 hours contact at average 1 hour contact plus 1 hour preparation results in 40-hour work week.

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